



SERVICE MANUAL

Model Series:

Product Type: PLASMA
Chassis: RF-02CA
Manual Series: PV154
Manual Part #: 923-03499
Model Line: E
Product Year: 2002

P50W26
P50W26B

-PRELIMINARY-
12/12/02

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Published September 2002
by Technical Publications
Zenith Electronics Corporation
201 James Record Road
Huntsville, Alabama 35824-1513

PRODUCT SAFETY GUIDELINES

IMPORTANT SAFETY NOTICE

This manual was prepared for use only by properly trained audio-visual service technicians.

When servicing this product, under no circumstances should the original design be modified or altered without permission from Zenith Electronics Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring and lead dress must conform to original layout upon completion of repairs.

Special components are also used to prevent x-radiation, shock and fire hazard. These components are indicated by the letter "x" included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by Zenith Electronics Corporation.

Circuit diagrams may occasionally differ from the actual circuit used. This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

CAUTION: Do not attempt to modify this product in any way. Never perform customized installations without manufacturer's approval. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

GRAPHIC SYMBOLS



The exclamation point within an equilateral triangle is intended to alert the service personnel to important safety information in the service literature.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the service personnel to the presence of noninsulated "dangerous voltage" that may be of sufficient magnitude to constitute a risk of electric shock.



The pictorial representation of a fuse and its rating within an equilateral triangle is intended to convey to the service personnel the following fuse replacement caution notice:

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ALL FUSES WITH THE SAME TYPE AND RATING AS MARKED NEAR EACH FUSE.

SERVICE INFORMATION

While servicing, use an isolation transformer for protection from AC line shock. After the original service problem has been corrected, make a check of the following:

FIRE AND SHOCK HAZARD

1. Be sure that all components are positioned to avoid a possibility of adjacent component shorts. This is especially important on items transported to and from the repair shop.
2. Verify that all protective devices such as insulators, barriers, covers, shields, strain reliefs, power supply cords, and other hardware have been reinstalled per the original design. Be sure that the safety purpose of the polarized line plug has not been defeated.
3. Soldering must be inspected to discover possible cold solder joints, solder splashes, or sharp solder points. Be certain to remove all loose foreign particles.
4. Check for physical evidence of damage or deterioration to parts and components, for frayed leads or damaged insulation (including the AC cord), and replace if necessary.
5. No lead or component should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. After reassembly of the set, always perform an AC leakage test on all exposed metallic parts of the cabinet (the channel selector knobs, antenna terminals, handle and screws) to be sure that set is safe to operate without danger of electrical shock. **DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST.** Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner: Connect a 1500 ohm, 10 watt resistor, paralleled by a .15 mfd 150V AC type capacitor between a known good earth ground water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and .15 mfd capacitor. Reverse the AC plug by using a non-polarized adaptor and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

TIPS ON PROPER INSTALLATION

1. Never install any receiver in a closed-in recess, cubbyhole, or closely fitting shelf space over, or close to, a heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as: outdoor patio installations where dew is a factor, near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct venting. The customer should also avoid the use of decorative scarves or other coverings that might obstruct ventilation.
4. Wall- and shelf-mounted installations using a commercial mounting kit must follow the factory-approved mounting instructions. A product mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom. Bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage tests on customized installations.
5. Caution customers against mounting a product on a sloping shelf or in a tilted position, unless the receiver is properly secured.
6. A product on a roll-about cart should be stable in its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against using a cart or stand that has not been listed by Underwriters Laboratories, Inc. for use with its specific model of television receiver or generically approved for use with TVs of the same or larger screen size.
8. Caution customers against using extension cords. Explain that a forest of extensions, sprouting from a single outlet, can lead to disastrous consequences to home and family.

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OVERVIEW

GENERAL INFO

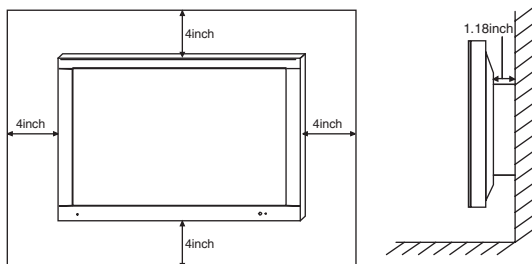
SPECIFICATIONS

Screen Size	50 in diagonal
Aspect Ratio	16:9 (width:height)
Max Resolution	1366 x 768p
Peak Brightness	230 cd/m (with Filter); Module: 510 cd/m ²
Contrast Ratio	600:1
Pixel Pitch	0.270 (H) x 0.810 (V)
Viewing Angle	160° horizontally and ver- tically
Displayable Colors	16.77 million
Color Temperature	8000K Fixed
Display Frequency	15.73 to 68kHz (H); 50 to 80 kHz (V)
Format Conversion	Intelligent Image Scaling to 1280 x 720p
Aspect Ratio Correction	16:9, 4:3 Zoom
Scan Converter	Faroudja, Sage
Multi-Lingual Menus	English, French, Spanish, Korean, Portugese
Operating Humidity Range	20–80%
Operating Max Altitude	2000m
Operating Temperature	Minus 5 °C – 45 °C
Temperature Range	Minus 20 °C – 60 °C
Power Consumption	560 Watts
Power Source	120V 60Hz

*Designs and specifications are subject to change without notice.

INSTALLATION

It is recommended that this product only be used at an altitude of less than 6562 feet (2000m) to get the best quality picture and sound. This plasma display is designed to be mounted horizontally (wide viewing).



- Your P50W26, P50W26B models (Monitor) can be installed on a wall or on a desktop pedestal. Wall mount

and stands are optional and not supplied with the monitor. (For further information, refer to the optional Tilt/Wall Mounting Bracket Installation and Setup Guide.) Install this monitor only in a location where adequate ventilation is available. Minimum allowable clearances for adequate ventilation are shown in the picture.

CONNECTING A COMPUTER

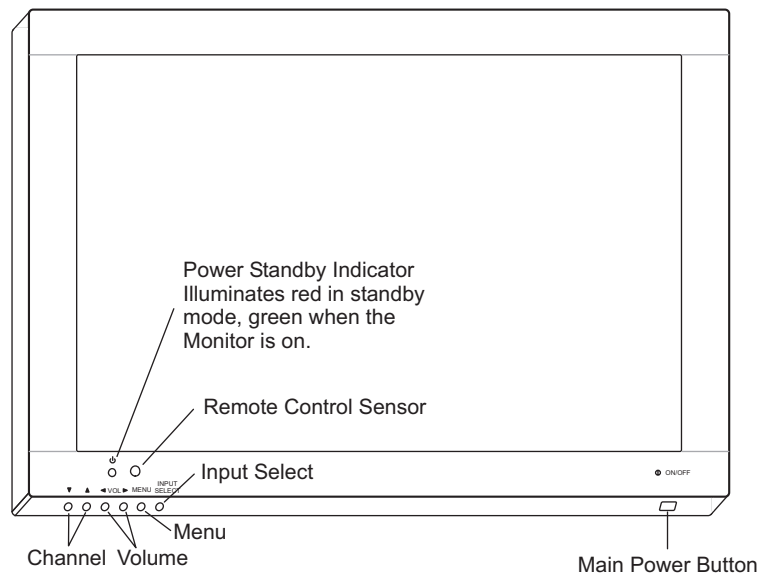
Connect the video output of the PC to the Monitor RGB-PC INPUT (VGA/SVGA/XGA) RGB-DTV INPUT (480p/720p/1080i) using a standard shielded VGA cable. Connect the audio out from the PC to the Audio jacks on the Monitor (Audio cables are not included with the Monitor). Set the computer video output to SXGA (1280x1024) or lower resolution. If the video output of the PC is not compatible with the Monitor, no picture will appear on the Monitor (see chart). Use the video/pc button on the remote control to select the RGB source. To set up this monitor in a PC Windows environment select Standard monitor. This monitor does not support Plug and Play function.

Note: Avoid prolonged display of a still image, as it may cause a permanent image to remain even after you change the image.

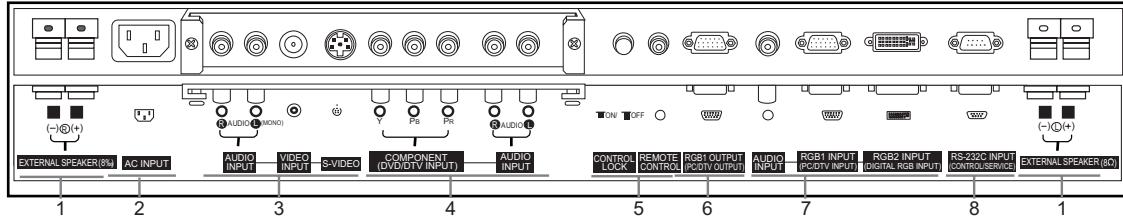
P42W22 Computer Video		
Resolution	Horizontal Frequency (KHz)	Vertical Frequency (KHz)
640x350	31.468	70.09
	37.861	85.08
640x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
	45.913	90.03
	53.011	100.04
	64.062	120.00
800x600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
	53.674	85.06
	56.000	90.00
832x624	64.016	100.00
	49.725	74.55
	48.363	60.00
	56.476	70.06
1024x768	60.023	75.02
	68.677	84.99

OVERVIEW

FRONT



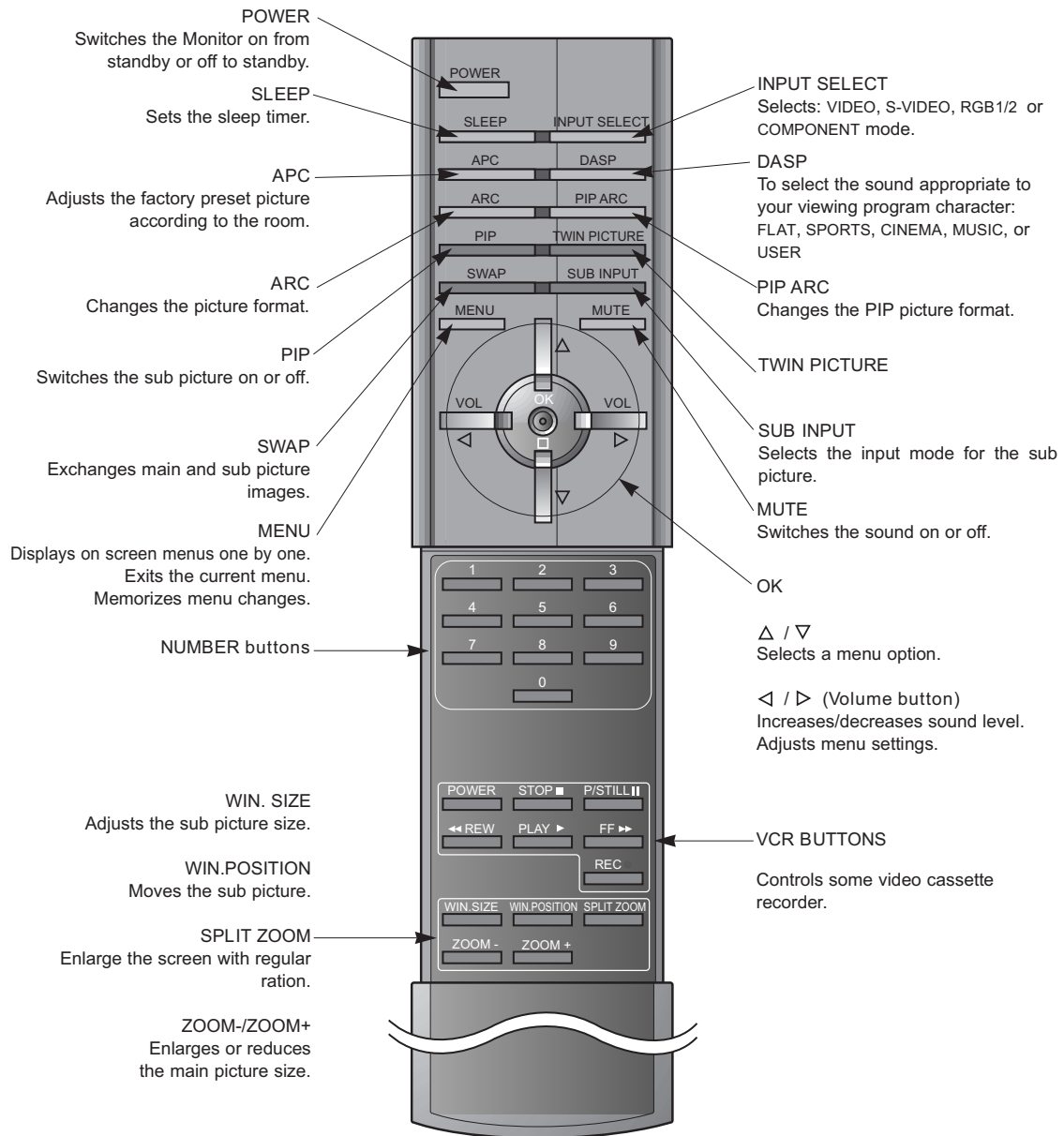
BACK



1. EXTERNAL SPEAKER (8 ohm output)
Connect to the optional external speaker(s).
2. POWER CORD SOCKET
This monitor operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the monitor on DC power.
3. AUDIO/VIDEO INPUT JACKS
Connect audio/video out from external equipment to these jacks.
4. COMPONENT INPUT JACKS
480i/480p/720p/1080i
5. CONTROL LOCK Locks the front keyboard. The remote must be used to control the TV.
6. RGB OUTPUT
Loop out to another monitor.
7. RGB INPUT
RGB signal input. Accepts VGA or DVI inputs.
8. RS-232C INPUT
Service port.

OVERVIEW

REMOTE CONTROL



SERVICING

SERVICING

OVERVIEW

Because this is not a hot chassis, it is not necessary to use an isolation transformer. However, the use of isolation transformer will help protect test instrument.

Adjustments must be done in the correct order. The adjustment must be performed at $25 \pm 5^{\circ}\text{C}$ of temperature and $65 \pm 10\%$ of relative humidity.

The input voltage of the receiver must maintain 110~240V, 50/60Hz while adjusting. Operate the receiver for about 15 minutes prior to the adjustment with 100% white pattern (06CH), or white condition in HEAT-RUN mode.

Enter into HEAT-RUN mode. Press the POWER ON KEY on R/C for adjustment. OSD display HEAT-RUN WHITE and screen display 100% full WHITE PATTERN. Set is activated HEAT-RUN without signal generator in this mode. Single color pattern of HEAT-RUN mode uses to check the PANEL (RED/BLUE/GREEN).

Caution: If you turn on a still screen more than 20 minutes, an afterimage may occur in the black level part of the screen. (Especially Digital Cross Hatch Pattern), a afterimage may be occur in the black level part of the screen.

RGB AUTO CUT-OFF & MIN BIAS

- 1) If the PDP Module or Power Board was replaced, adjust the Power PCB Assy Voltage prior to any other adjustment.
- 2) Input Full Back (0 Gray) signal which generated from Pattern Generator into Component input and RGB1 Input part.
- 3) Press POWER ON KEY on R/C for adjustment and select AUTO-CUT(Cut-off Auto Adjustment).
- 4) Press Vol. + key.
- 5) Screen adjustment starts with Full Black screen. Original Window screen will be presented about 5-6 seconds later. And if (OK OSD) appears on the screen, then the Auto Cut-off and Min-Bias adjustment will have been completed.

MAX BIAS ADJUSTMENT

- 1) Input Full White (255 Gray) signal which generated from Pattern Generator into Component input and RGB1 Input.
- 2) Press POWER ON KEY on R/C for adjustment and select MAX-BIAS.
- 3) Press Vol. + key.
- 4) Original Full White screen will be presented about 1-2 seconds later. And if (OK OSD) appears on the screen then the Min-Bias adjustment will have been completed.

- (5) After adjustment, press ¥ key to save adjustment and come out of the adjustment mode.

To check whether the circuit adjustment is operated well or not:

- 1) Display RGB1 to the Main picture, Component input to the Sub picture in the TWIN PICTURE.
- 2) To check the MIN-Bias, input Full Black (0 gray) signal into Component input and RGB1 input part at the same time in the Pattern Generator.
- 3) To check the MAX-Bias, input Full White (255 gray) signal into Component input and RGB1 input part at the same time in the Pattern Generator.
- 4) Compare Black Level with White Level by eye. And if there is no Level difference, the adjustment is completed.

Data value, which adjusted in the board, is valid until the VSC Board is dissued and must be protected. For the protection of data, Micom does not permit any more adjustment after completion.

In case of re-adjustment, operate First Value Setting. Each PCB Assy must be checked by Check JIG Set before assembly. (Especially, be careful Power PCB Assy which can cause fatal Damage to PDP Module.)

POWER PCB ASSY VOLTAGE

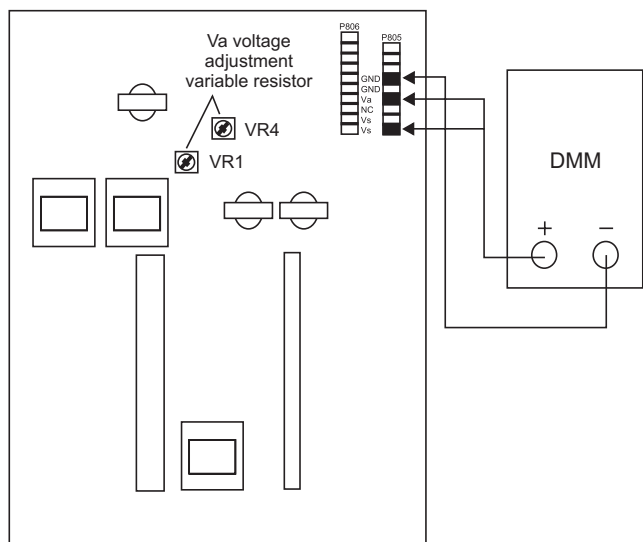
VA ADJUSTMENT

- 1) Test Equipment : D.M.M 1EA
- 2) After receiving 100% white pattern, HEAT RUN.
- 3) Connect + terminal of D.M.M to Va pin of P805 and connect Ø terminal to GND pin of P805.
- 4) After turning the VR4, voltage of D.M.M adjustment as same as Va voltage which on label of panel Right/Top. (Deviation : $\pm 0.5\text{V}$)

VS ADJUSTMENT

- 1) Connect + terminal of the D.M.M to Vs pin of P805 and connect - terminal to GND pin of P805.
- 2) After turning the VR1, voltage of D.M.M adjustment as same as Vs voltage which on label of panel Right/Top. (Deviation : $\pm 0.5\text{V}$)

SERVICING



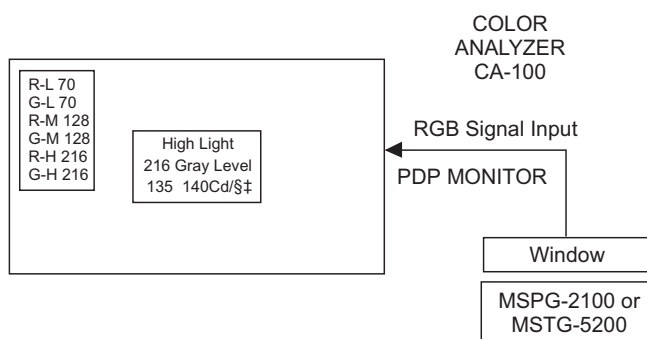
<Fig 1> Connection Diagram of Power Adjustment

ADJUSTMENT OF WHITE BALANCE

REQUIRED EQUIPMENT

Color analyzer (CA-100 or same product)

CONNECTION DIAGRAMS (MANUAL ADJUSTMENT)



<Fig 2> Connection Diagram of Manual Adjustment(High Light)

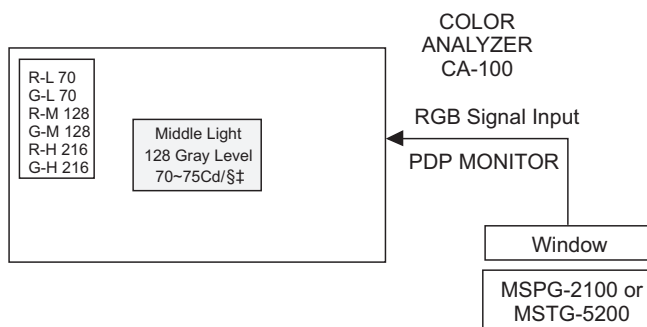
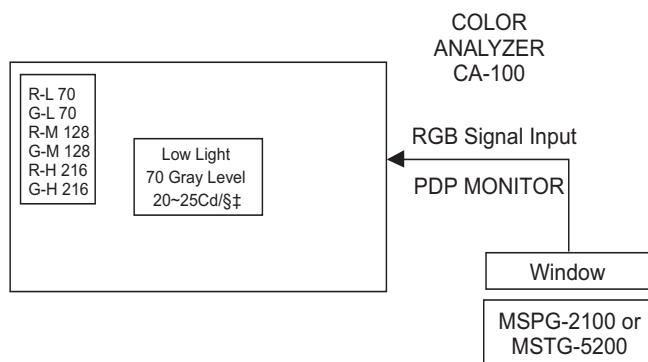


Fig 3> Connection Diagram of Manual Adjustment(Middle Light)



<Fig 4> Connection Diagram of Manual Adjustment(Low Light)

ADJUSTMENT OF WHITE BALANCE

Operate the Zero-calibration of the CA-100, then stick sensor to PDP module surface when you adjust. For manual adjustment, it is also possible by the following sequence.

- 1) Select WHITE PATTERN of HEAT RUN mode by pressing POWER ON KEY on remote control for adjustment then operate HEAT RUN more than 15 minute.
- 2) Supply 216Gray, 128Gray, 70Gray Level, 50% size length and breadth signal to RGB1 input. (Refer to Fig 2,3,4)
- 3) W/B adjustment must be adjusted once and follow the sequence of Low Light $\rightarrow$ Middle Light $\rightarrow$ High Light and then save the adjustment value with o Key.
- 4) To adjust Low Light, stick sensor to Gray Level(or 20~25 Cd/m²) Pattern, press ADJ Key on R/C for adjustment and press v, x on R/C in adjustment mode to select R-L or G-L, press VOL +, - Key and adjust it until color coordination becomes as below.

X: 0.290 ± 0.003 , Y: 0.300 ± 0.003

Color temperature: 8, $500^\circ\text{K} \pm 500^\circ\text{K}$

- 5) To adjust Middle Light, stick sensor to Gray Level (or 70~75 Cd/m²) Pattern, press ADJ Key on R/C for adjustment and press v, x on R/C in adjustment mode to select R-M or G-M, press VOL +, - Key and adjust it until color coordination becomes as below.

X: 0.290 ± 0.003 , Y: 0.300 ± 0.003

Color temperature: 8, $500^\circ\text{K} \pm 500^\circ\text{K}$

- 6) To adjust High Light, stick sensor to Gray Level(or 135-140 Cd/m²) Pattern, press ADJ Key on the R/C for adjustment and press v, x on R/C in adjustment mode to select R-L or G-L, press VOL +, - Key and adjust it until color coordination becomes as below.

SERVICING

X: 0.290 ± 0.003 , Y: 0.300 ± 0.003

Color temperature: 8, 500;K $\pm$ 500;K

7) Exit adjustment mode using o Key.

DDC DATA INPUT

REQUIRED TEST EQUIPMENT

- 1) A jig for adjusting PC, DDC. (PC serial to D-sub. Connection equipment)
- 2) S/W for writing DDC(EDID data write & read)
- 3) D-Sub 15P cable, D-Sub to DVI Connector (Connect to DVI Jack)

PREPARATION FOR ADJUSTMENT

- 1) Set devices as above and turn the PC, jig on.
- 2) Put S/W for writing DDC (EDID data write & read) into operation. (operated in DOS mode.)

SEQUENCE OF ADJUSTMENT

DDC DATA INPUT FOR ANALOG-RGB

- 1) Put the set on the table and turn the power on.
- 2) Connect PC Serial to D-sub 15P Cable of JIG for DDC adjustment to RGB1 terminal (D-Sub 15Pin).
- 3) Operate S/W for DDC record and select DDC Data for analog RGB in Model Menu.
- 4) Operate EDID Write command.
- 5) Operate EDID Read command and check whether Check Sum is OK.
- 6) If Check Sum is NG, repeat 3-4.
- 7) If Check Sum is OK, DDC Data for Analog-RGB input is completed.

DDC DATA INPUT FOR DIGITAL-RGB

- 1) Connect PC Serial to DVI Cable of JIG for DDC adjustment to RGB2 terminal (DVI Jack).
- 2) Operate S/W for DDC record and select DDC Data for Digital RGB in Model Menu.
- 3) Operate EDID Write command.
- 4) Operate EDID Read command and check whether Check Sum is OK.
- 5) If Check Sum is NG, repeat 3 & 4.
- 6) If Check Sum is OK, DDC Data for Digital-RGB input is completed.

COMPONENT OFF-SET ADJUSTMENT

- 1) Input the signal to HD-STB(SK-010T) and receive 14Ch.
- 2) Input Video signal and Component 720P, 1080i signal of HD-STB into AV1 and Component input part.
- 3) Select Twin Picture by pressing ADJ twice on R/C, check component in the main picture and AV1 in the sub picture.
- 4) Adjust the R-OFFSET, B-OFFSET color impression of component(Main picture) and external Input(Sub picture) same by pressing Volume +,- key.

SERVICING

EXTERNAL CONTROL

OVERVIEW

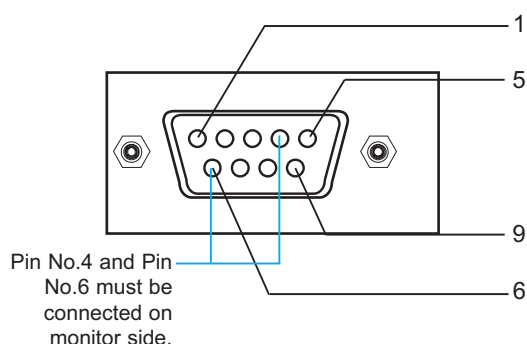
Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the set's functions externally.

Connect the serial port of the control device to the RS-232C jack on the Monitor back panel. RS-232C connection cables are not supplied with the set. The set's remote control and front panel controls (except main power) will not be functional if the set is controlled by a PC computer or other external device.

CONNECTION

Type of connector is a D-Sub 9-pin male (Use a null modem/serial cable). Wire the 7-Wire cable so that each pair of data lines cross between the two devices. These data line pairs are RXD (Receive data) and TXD (Transmit data), DTR (DTE side ready) and DSR (DCE side ready), and RTS (Ready to send) and CTS (Clear to send).

When using the 3-Wire cable connected to RXD, TXD and GND; Pin No. 4 (DTR) and Pin No. 6 (DSR) must be connected to the monitor. (The cable must be disconnected from the Monitor to be able to use the remote control and Monitor front panel controls.)



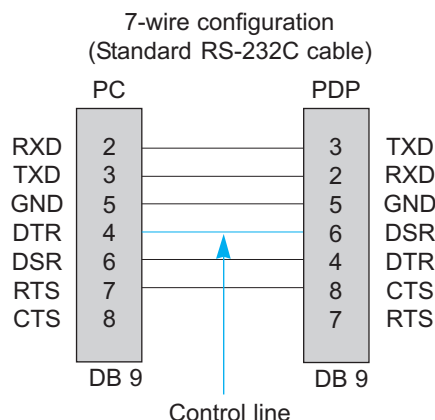
No.	Pin name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection

With the RS-232 input connected, the set cannot be controlled by both an external control device and the remote control at the same time. The set can only be controlled by either the remote control or the external

control device.

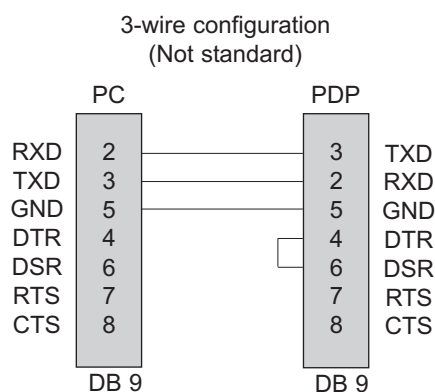
RS-232C CONFIGURATIONS

7-WIRE CABLE CONFIGURATION



The Monitor is available to switch between external adjustment and remote control adjustment using a control line. If the control line is high, the monitor is controlled by the external control device. If the control line is low, the Monitor is controlled by the Monitor's remote control.

3-WIRE CABLE CONFIGURATION



When using a 3-Wire cable configuration there is no control line. The external control device must put the Monitor into the "change into remote control adjustment mode". The Monitor will then be able to be controlled by the remote control. If the Monitor is turned back on, it will revert back to external device control.

SET ID

Set ID to specify a monitor identification number. Press the menu button and then use the up/down button to select the SPECIAL menu. Press the vol (G) button.

Use the up/down buttons to select SET ID and then press

SERVICING

the volume up button. Use the volume button to adjust SET ID to choose a desired monitor ID number. The adjustment range for SET ID is 1- 99. Default monitor ID is 1.

COMMUNICATION

COMMUNICATION PARAMETERS

- Baud rate: 2400 bps (UART)
- Data length: 8 bits
- Parity: None
- Stop bit: 1 bit
- Communication code: ASCII code

If the command interval is interrupted for more than 4 seconds, only Command 1 will be recognized. Be careful when using the power command.

COMMAND REFERENCE LIST

NAME	COMMAND	DATA RANGE
01. Power	p	0 - 1
02. Input Select	i	0 - 3
03. Aspect Ratio	r	0 - 2
04. Screen mute	m	0 - 1
05. Volume mute	w	0 - 1
06. Volume control	v	0 - 64
07. Contrast	k	0 - 64
08. Brightness	b	0 - 64
09. Color	c	0 - 64
10. Tint	t	0 - 64
11. Sharpness	s	0 - 64
12. OSD select	d	0 - 1
13. Abnormal state	a	0 - 1
14. PIP	z	0 - 3
15. PIP input select	e	0 - 1
16. PIP sound select	u	0 - 1
17. PIP position	x	0 - 3
18. remote control adjustment mode	j	0 - 1

Note: Data values are written in hexadecimal. They must be passed to the monitor in Hexidecimal form.

Transmission / Receiving Protocol

Transmission

[Command][][Set ID][][Data][Cr]

- * [Command] : To control PDP set.
- * [Set ID] : You can adjust the set ID to choose desired monitor ID number in special menu. See page 47. Adjustment range is 1 ~ 99.
When selecting Set ID 00 every connected PDP set is controlled.
- * [DATA] : To transmit command data.
Transmit 0F0 data to read status of command.
- * [Cr] : Carriage Return
ASCII code 0x0D
- * [] : ASCII code 0x20

OK Acknowledgement

[Set ID][:][OK][x][Data][x]

- * The Monitor transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Set ID][:][NG][x]

- * The Monitor transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

01. Power (Command:p)

- To control Power On/Off of the Monitor.

Transmission

[p][][Set ID][][Data][Cr]

Data 0 : Power Off
1 : Power On

* Example : Power on for set ID No.3.
Type : P 3 1 0x0D0

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data 0 : Power Off
1 : Power On

* In example : Monitor Acknowledges power on for set ID No.3.

- To show Power On/Off.

Transmission

[p][][Set ID][][FF][Cr]

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data 0 : Power Off
1 : Power On (RGB)
2 : Power On (Video)
3 : Power On (Component)
4 : Power On (S-Video)

* In like manner, if other functions transmit 0xF0 data based on this format, Acknowledgement data feed back presents status about each function.

02. Input select (Command:i)

- To select input source for the Monitor.
You can also select an input source using the video/pc button on the Monitor's remote control.

Transmission

[i][][Set ID][][Data][Cr]

Data 0 : RGB
1 : AV (Video)
2 : Component
3 : S-AV (S-Video)

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data 0 : RGB
1 : AV (Video)
2 : Component
3 : S-AV (S-Video)

03. Aspect Ratio (Command:r)

- To adjust the screen format.
You can also adjust the screen format using the ratio (Aspect Ratio Control) button on remote control or in the Special menu.

Transmission

[r][][Set ID][][Data][Cr]

Data 0 : Wide screen (16:9)
1 : Normal screen (4:3)
2 : Full screen (Zoom)

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data 0 : Wide screen (16:9)
1 : Normal screen (4:3)
2 : Full screen (Zoom)

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.

* Using the DTV 720p/1080i input, you can only select 16:9 screen aspect ratio.

04. Screen mute (Command:m)

- To select screen mute on/off.

Transmission

[m][][Set ID][][Data][Cr]

Data 0 : Screen mute on (Picture off)
1 : Screen mute off (Picture on)

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data 0 : Screen mute on (Picture off)
1 : Screen mute off (Picture on)

05. Volume mute (Command:w)

- To control volume mute on/off.
You can also adjust mute using the mute button on remote control.

Transmission

[w][][Set ID][][Data][Cr]

Data 0 : Volume mute on (Volume off)
1 : Volume mute off (Volume on)

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data 0 : Volume mute on (Volume off)
1 : Volume mute off (Volume on)

06. Volume control (Command:v)

- To adjust volume.
You can also adjust volume with the volume buttons on remote control.

Transmission

[v][][Set ID][][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to Real data mapping as shown below.

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data Min : 0 ~ Max : 64

07. Contrast (Command:k)

- To adjust screen contrast.
You can also adjust contrast in the Picture menu.

Transmission

[k][][Set ID][][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to Real data mapping as shown below.

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data Min : 0 ~ Max : 64

08. Brightness (Command:b)

- To adjust screen brightness.
You can also adjust brightness in the Picture menu.

Transmission

[b][][Set ID][][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to Real data mapping as shown below.

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data Min : 0 ~ Max : 64

09. Color (Command:c)

- To adjust the screen color.
You can also adjust color in the Picture menu.

Transmission

[c][][Set ID][][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to Real data mapping as shown below.

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data Min : 0 ~ Max : 64

10. Tint (Command:t)

- To adjust the screen tint.
You can also adjust tint in the Picture menu

Transmission

[t][][Set ID][][Data][Cr]

Data Red : 0 ~ Green : 64
* Refer to Real data mapping as shown below.

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data Red : 0 ~ Green : 64

11. Sharpness (Command:s)

- To adjust the screen sharpness.
You can also adjust sharpness in the Picture menu

Transmission

[s][][Set ID][][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to Real data mapping as shown below.

Acknowledgement

[Set ID]::[OK][x][Data][x]

Data Min : 0 ~ Max : 64

SERVICING

12. OSD select (Command:d)

- To select OSD (On Screen Display) on/off.

Transmission

[d][][Set ID][][Data][Cr]

Data 0 : OSD off
1 : OSD on

Acknowledgement

[Set ID]:[OK][x][Data][x]

Data 0 : OSD off
1 : OSD on

- * The remote control and Monitor front panel controls (except main power) are not operable when the Monitor is set up to be controlled by the PC computer.

13. Abnormal state (Command:a)

- To recognize an abnormal state.

Transmission

[a][][Set ID][][FF][Cr]

Acknowledgement

[Set ID]:[OK][x][Data][x]

Data 0 : OK
1 : Fan alarm
2 : 5V down
3 : AC down

- * This function is read only

14. PIP (Command:z)

- To control PIP (Picture-in-Picture). You can also control PIP using the pip button on remote control or in the Special menu.

Transmission

[z][][Set ID][][Data][Cr]

Data 0 : PIP off
1 : PIP (small)
2 : PIP (large)

Acknowledgement

[Set ID]:[OK][x][Data][x]

Data 0 : PIP off
1 : PIP (small)
2 : PIP (large)

- * PIP only works in the following resolutions:
RGB PC 640x480 (VGA) / 800x600(SVGA) / 1024x768 (XGA) (only in vertical frequency 60Hz),
Component 480p / 720p / 1080i.

15. PIP input select (Command:e)

- To select input source for sub picture in PIP mode. You can also select source using input select button on the remote control or in the Special menu.

Transmission

[e][][Set ID][][Data][Cr]

Data 0 : AV (VIDEO)
1 : COMPONENT
2 : S-AV (S-VIDEO)

Acknowledgement

[Set ID]:[OK][x][Data][x]

Data 0 : AV (VIDEO)
1 : COMPONENT
2 : S-AV (S-VIDEO)

- * COMPONENT source only works with 480i input signal.

16. PIP sound select (Command:u)

- ▶ To select main or sub (inset) sound for PIP.
You can also select sound select in PIP on the special menu.

Transmission

[u] [Set ID] [Data] [Cr]

Data 0 : Main picture sound
1 : Sub picture sound

Acknowledgement

[Set ID] [:] [OK] [x] [Data] [x]

Data 0 : Main picture sound
1 : Sub picture sound

* COMPONENT source only works in 480i input signal.

18. Change into Remote control adjustment mode (Command:j)

- ▶ To control the Monitor with the remote control while the cable is still connected.

Transmission

[j] [Set ID] [Data] [Cr]

Data 1 : Remote control adjustment mode

Acknowledgement

[Set ID] [:] [OK] [x] [Data] [x]

Data 0 : PC adjustment mode
1 : Remote control adjustment mode

* If external equipment commands the Monitor to "change into remote control adjustment mode", the Monitor can only be adjusted by the remote control. To revert the Monitor control to external control device adjustment, turn the Monitor off and then on again.

17. PIP position (Command:x)

- ▶ To select sub picture position for PIP.
You can also adjust the sub picture position using the position button on the remote control or in PIP on the Special menu.

Transmission

[x] [Set ID] [Data] [Cr]

Data 0 : Right down on screen
1 : Left down on screen
2 : Left up on screen
3 : Right up on screen

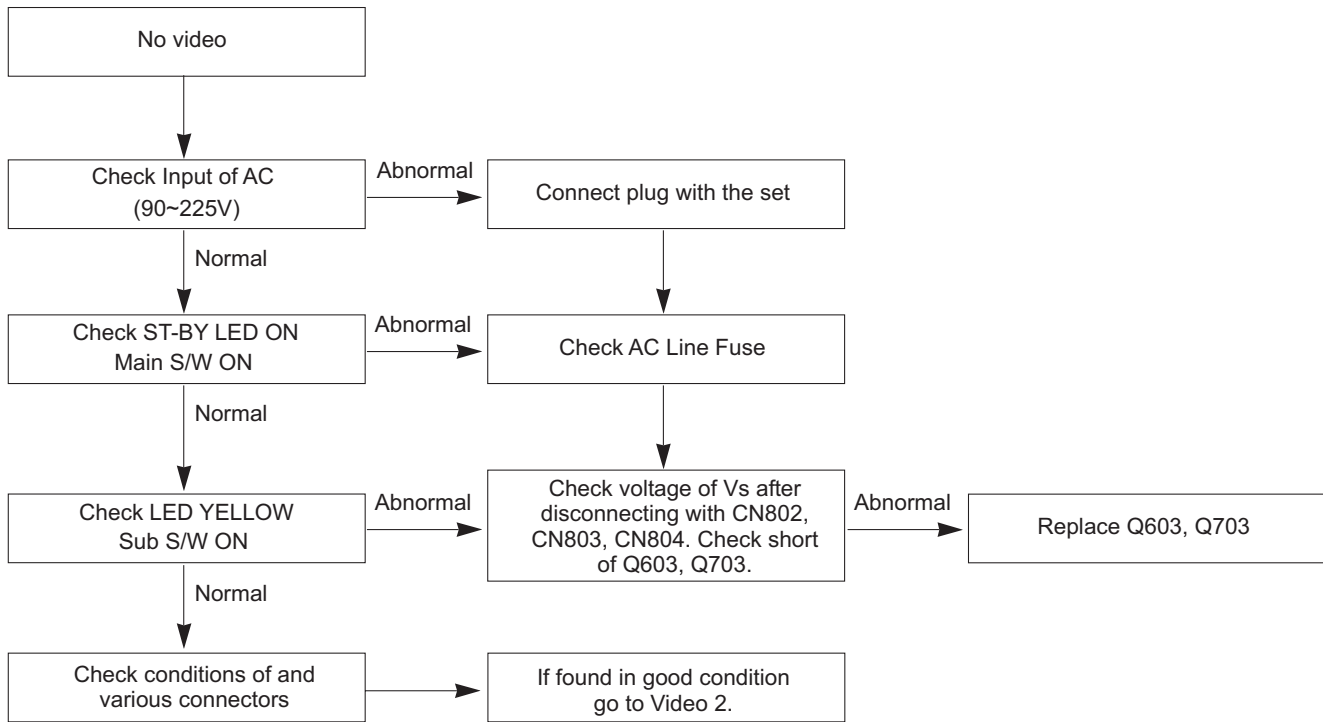
Acknowledgement

[Set ID] [:] [OK] [x] [Data] [x]

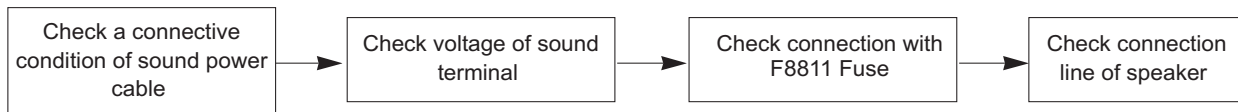
Data 0 : Right down on screen
1 : Left down on screen
2 : Left up on screen
3 : Right up on screen

SERVICING

NO VIDEO 1



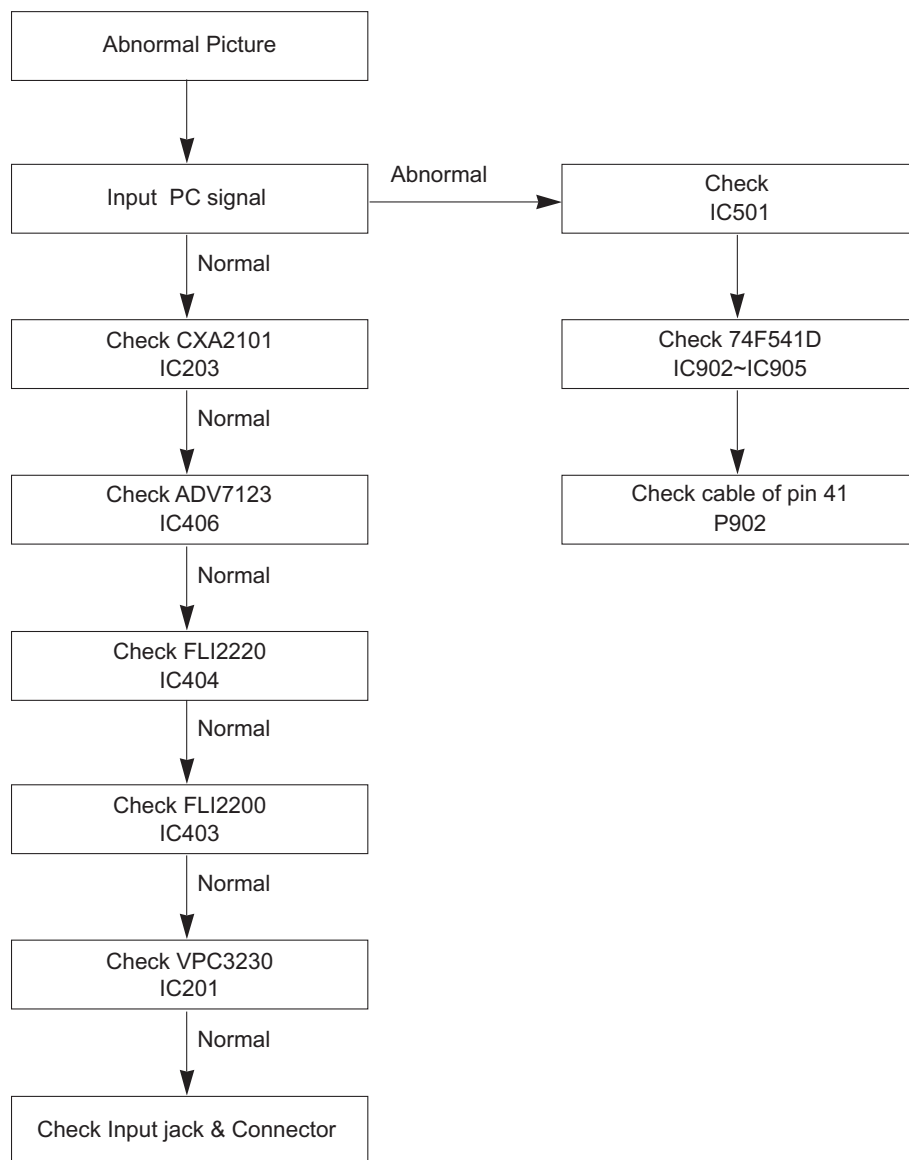
NO SOUND



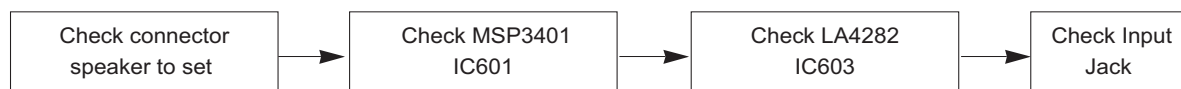
SERVICING

TROUBLESHOOTING

NO VIDEO 2



NO SOUND



PARTS

All 50" models are module level repair only. Parts contact information is below.

Voice: 1-888-3-ZENITH

Fax: 1-888-6-ZENITH

Mail: Zenith National Parts
201 James Record Road
Huntsville, AL 35824-1513

P50W26

Loc.	Part No	Description
200	6348Q-C030C	PDP 50" 16:9 1365*768 DU
201	6871QCH019A	PCB ASSY,DI CTRL
202	6871QDH030A	PCB ASSY,DI YDRV
203	6871QDH031A	PCB ASSY,DI YDRV
204	6871QLH018A	PCB ASSY,DI XRLT
205	6871QLH019A	PCB ASSY,DI XRLT
206	6871QPH006A	PCB ASSY,MA DCDC ASSY
207	6871QRH016A	PCB ASSY,DI XRRT ASSY
208	6871QRH017A	PCB ASSY,DI XRRT ASSY
209	6871QXH011A	PCB ASSY,DI XRCT ASSY
210	6871QXH012A	PCB ASSY,DI XRCT ASSY
211	6871QYH020A	PCB ASSY,DI YSUS ASSY
212	6871QZH021A	PCB ASSY,DI ZSUS ASSY
213	4980V00416A	SUP ASSY RIG
214	4980V00416B	SUP ASSY LEF
215	4980V00498A	SUP ASSY, SMPS
300	3091V00433F	CABINET STEREO RF
301	4980V00361A	SUPPORTER FILTER TOP
302	4980V00362A	SUPPORTER FILTER BOTTOM
303	4980V00363A	SUPPORTER FILTER SIDE
305	3790V00311C	WINDOW GLASS FILTER
310	5020V00688B	BUTTON CONTROL
320	320-062H	SPRING COIL
330	5020V00645B	POWER BUTTON
400	3809V00292A	BACK COVER ASSY INNER
401	3301V00009D	PLATE ASSY AV
410	3809V00293C	BACK COVER ASSY
520	6871VMMC08A	PCB MAIN RF-02CA
530	6871VSMD10A	PCB EXTRA RF-02CA 50IN
540	6871VSMD04A	PCB INTER RF-02CA I/F NT
550	6871VSMD06A	PCB A/V RF-02CA 50IN AUD
560	6871VSMD11A	PCB SPK RF-02CA 50IN RIG
561	4980V00384A	SUP INTERFACE MN-50
570	3141VSNA57A	CHASSIS SUB RF-02CA
580	6871VSMD08A	PCB KBD RF-02CA 50IN
581	5020V00647A	BUTTON CONTROL INNER
590	6871VSMD09A	PCB PSW RF-02CA 50IN
591	5020V00648A	POWER BUTTON INNER MN-50PZ4
600	6871VSMN17A	PCB EXTRA RF02CA
610	3501V00085A	BOARD ASSY P-BOARD

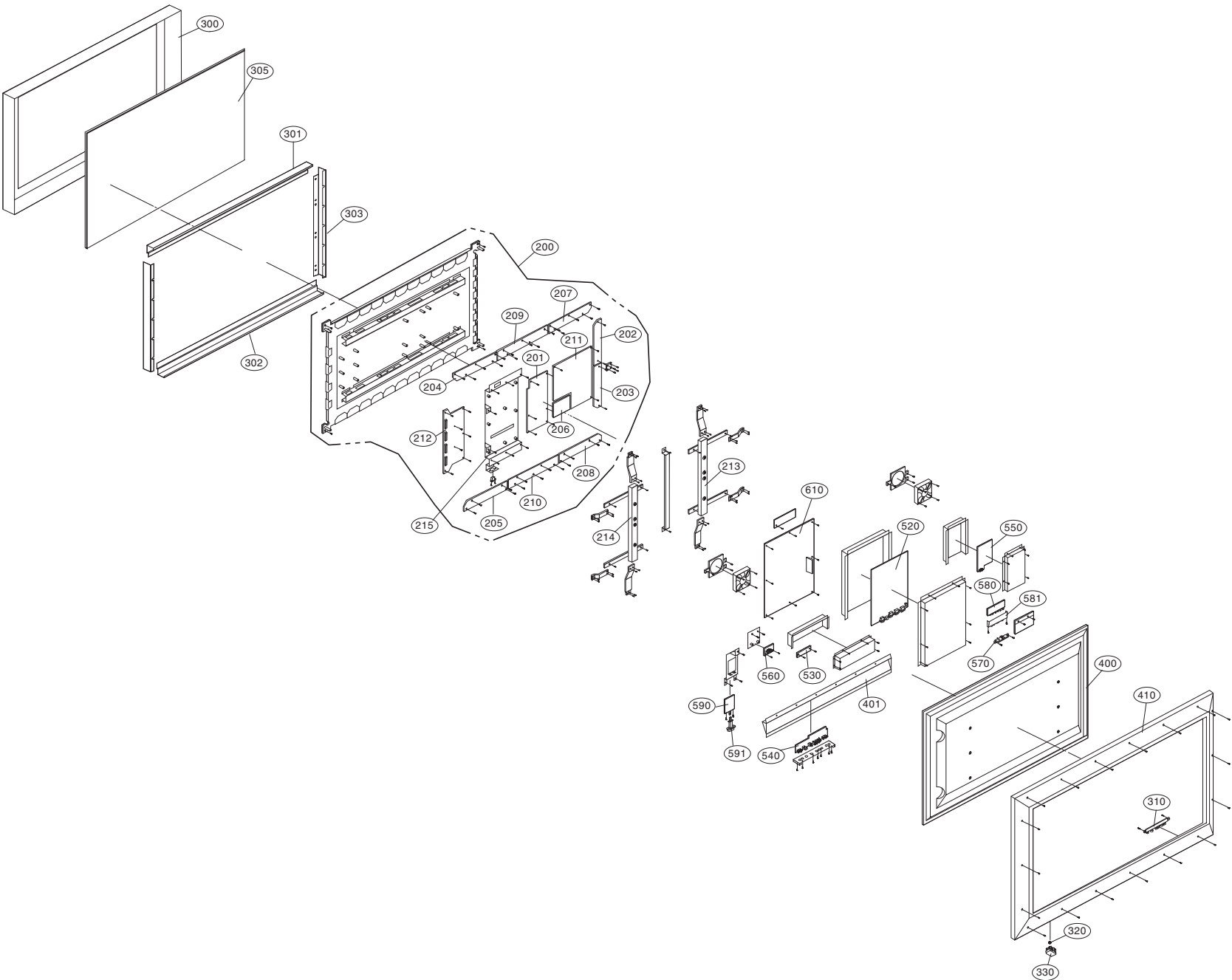
P50W26B

Loc.	Part No.	Description
200	6348Q-C030C	PDP 50" 16:9 1365*768 DU
201	6871QCH019A	PCB ASSY,DI CTRL
202	6871QDH030A	PCB ASSY,DI YDRV
203	6871QDH031A	PCB ASSY,DI YDRV
204	6871QLH018A	PCB ASSY,DI XRLT
205	6871QLH019A	PCB ASSY,DI XRLT
206	6871QPH006A	PCB ASSY,MA DCDC ASSY
207	6871QRH016A	PCB ASSY,DI XRRT ASSY
208	6871QRH017A	PCB ASSY,DI XRRT ASSY
209	6871QXH011A	PCB ASSY,DI XRCT ASSY
210	6871QXH012A	PCB ASSY,DI XRCT ASSY
211	6871QYH020A	PCB ASSY,DI YSUS ASSY
212	6871QZH021A	PCB ASSY,DI ZSUS ASSY
213	4980V00416A	SUP ASSY RIG
214	4980V00416B	SUP ASSY LEF
215	4980V00498A	SUP ASSY, SMPS
300	3091V00433E	CABINET STEREO RF
301	4980V00361A	SUPPORTER FILTER TOP
302	4980V00362A	SUPPORTER FILTER BOTTOM
303	4980V00363A	SUPPORTER FILTER SIDE
305	3790V00311C	WINDOW GLASS FILTER
310	5020V00688A	BUTTON CONTROL
320	320-062H	SPRING COIL
330	5020V00645A	POWER BUTTON
400	3809V00292A	BACK COVER ASSY INNER
401	3301V00009D	PLATE ASSY AV
410	3809V00293B	BACK COVER ASSY
520	6871VMMC08A	PCB MAIN RF-02CA
530	6871VSMD10A	PCB EXTRA RF-02CA 50IN
540	6871VSMD04A	PCB INTER RF-02CA I/F NT
550	6871VSMD06A	PCB A/V RF-02CA 50IN AUD
560	6871VSMD11A	PCB SPK RF-02CA 50IN RIG
561	4980V00384A	SUP INTERFACE MN-50
570	3141VSNA57A	CHASSIS SUB RF-02CA
580	6871VSMD08A	PCB KBD RF-02CA 50IN
581	5020V00647A	BUTTON CONTROL INNER
590	6871VSMD09A	PCB PSW RF-02CA 50IN
591	5020V00648A	POWER BUTTON INNER MN-50PZ4
600	6871VSMN17A	PCB EXTRA RF02CA
610	3501V00085A	BOARD ASSY P-BOARD

zenith 

P50W26 Exploded View

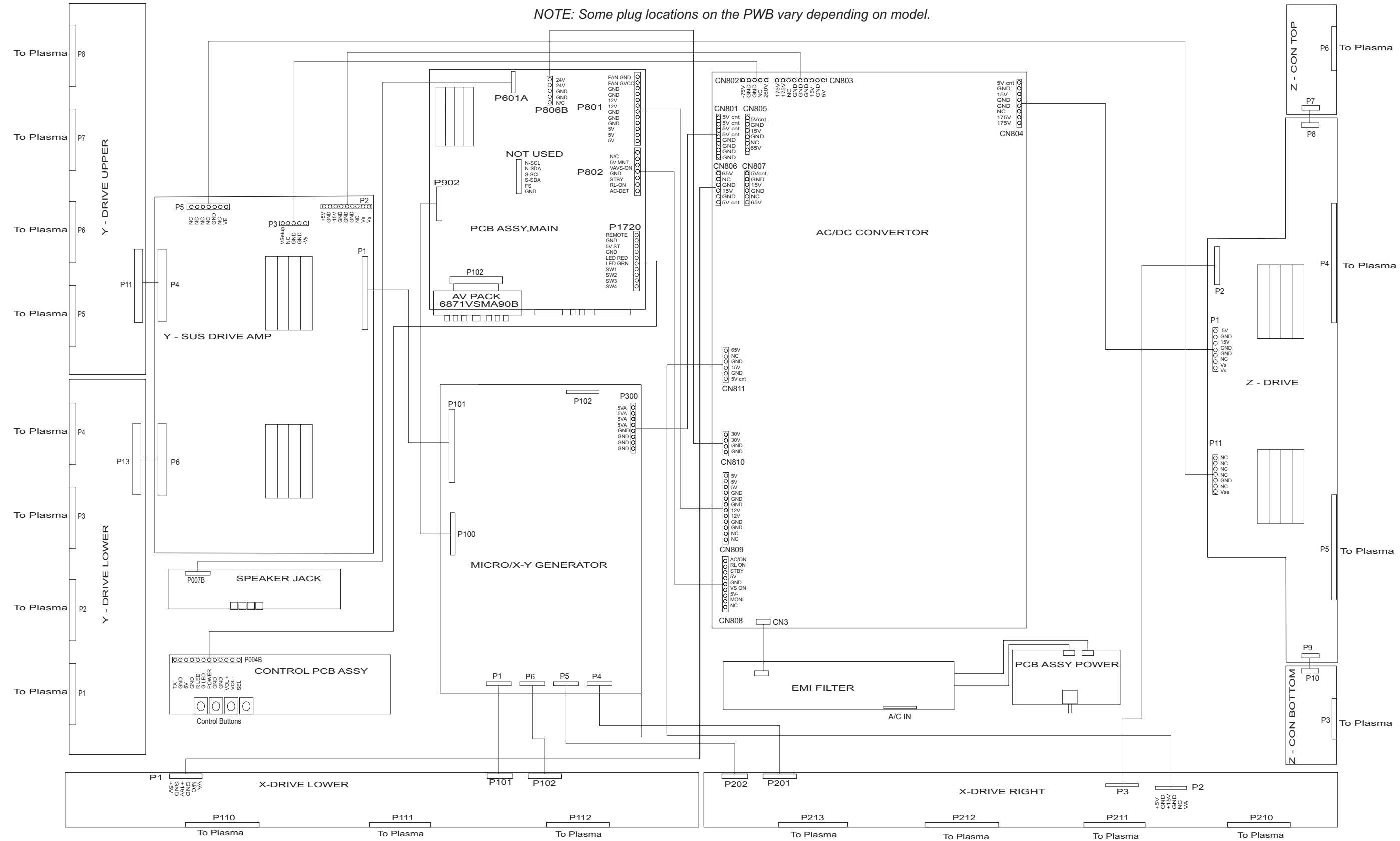
P50W26		
Loc.	Part No.	Description
200	6348Q-C030C	PDP 50" 16:9 1365*768 DU
201	6871QCH019A	PCB ASSY,DI CTRL
202	6871QDH030A	PCB ASSY,DI YDRV
203	6871QDH031A	PCB ASSY,DI YDRV
204	6871QLH018A	PCB ASSY,DI XRLT
205	6871QLH019A	PCB ASSY,DI XRLT
206	6871QPH006A	PCB ASSY,MA DCDC ASSY
207	6871QRH016A	PCB ASSY,DI XRRT ASSY
208	6871QRH017A	PCB ASSY,DI XRRT ASSY
209	6871QXH011A	PCB ASSY,DI XRCT ASSY
210	6871QXH012A	PCB ASSY,DI XRCT ASSY
211	6871QYH020A	PCB ASSY,DI YSUS ASSY
212	6871QZH021A	PCB ASSY,DI ZSUS ASSY
213	4980V00416A	SUP ASSY RIG
214	4980V00416B	SUP ASSY LEF
215	4980V00498A	SUP ASSY, SMPS
300	3091V00433F	CABINET STEREO RF
301	4980V00361A	SUPPORTER FILTER TOP
302	4980V00362A	SUPPORTER FILTER BOTTOM
303	4980V00363A	SUPPORTER FILTER SIDE
305	3790V00311C	WINDOW GLASS FILTER
310	5020V00688B	BUTTON CONTROL
320	320-062H	SPRING COIL
330	5020V00645B	POWER BUTTON
400	3809V00292A	BACK COVER ASSY INNER
401	3301V00009D	PLATE ASSY AV
410	3809V00293C	BACK COVER ASSY
520	6871VMMC08A	PCB MAIN RF-02CA
530	6871VSMD10A	PCB EXTRA RF-02CA 50IN
540	6871VSMD04A	PCB INTER RF-02CA I/F NT
550	6871VSMD06A	PCB A/V RF-02CA 50IN AUD
560	6871VSMD11A	PCB SPK RF-02CA 50IN RIG
561	4980V00384A	SUP INTERFACE MN-50
570	3141VSNA57A	CHASSIS SUB RF-02CA
580	6871VSMD08A	PCB KBD RF-02CA 50IN
581	5020V00647A	BUTTON CONTROL INNER
590	6871VSMD09A	PCB PSW RF-02CA 50IN
591	5020V00648A	POWER BUTTON INNER MN-50PZ4
600	6871VSMN17A	PCB EXTRA RF02CA
610	3501V00085A	BOARD ASSY P-BOARD



P50W26B		
Loc.	Part No.	Description
200	6348Q-C030C	PDP 50" 16:9 1365*768 DU
201	6871QCH019A	PCB ASSY,DI CTRL
202	6871QDH030A	PCB ASSY,DI YDRV
203	6871QDH031A	PCB ASSY,DI YDRV
204	6871QLH018A	PCB ASSY,DI XRLT
205	6871QLH019A	PCB ASSY,DI XRLT
206	6871QPH006A	PCB ASSY,MA DCDC ASSY
207	6871QRH016A	PCB ASSY,DI XRRT ASSY
208	6871QRH017A	PCB ASSY,DI XRRT ASSY
209	6871QXH011A	PCB ASSY,DI XRCT ASSY
210	6871QXH012A	PCB ASSY,DI XRCT ASSY
211	6871QYH020A	PCB ASSY,DI YSUS ASSY
212	6871QZH021A	PCB ASSY,DI ZSUS ASSY
213	4980V00416A	SUP ASSY RIG
214	4980V00416B	SUP ASSY LEF
215	4980V00498A	SUP ASSY, SMPS
300	3091V00433E	CABINET STEREO RF
301	4980V00361A	SUPPORTER FILTER TOP
302	4980V00362A	SUPPORTER FILTER BOTTOM
303	4980V00363A	SUPPORTER FILTER SIDE
305	3790V00311C	WINDOW GLASS FILTER
310	5020V00688A	BUTTON CONTROL
320	320-062H	SPRING COIL
330	5020V00645A	POWER BUTTON
400	3809V00292A	BACK COVER ASSY INNER
401	3301V00009D	PLATE ASSY AV
410	3809V00293B	BACK COVER ASSY
520	6871VMMC08A	PCB MAIN RF-02CA
530	6871VSMD10A	PCB EXTRA RF-02CA 50IN
540	6871VSMD04A	PCB INTER RF-02CA I/F NT
550	6871VSMD06A	PCB A/V RF-02CA 50IN AUD
560	6871VSMD11A	PCB SPK RF-02CA 50IN RIG
561	4980V00384A	SUP INTERFACE MN-50
570	3141VSNA57A	CHASSIS SUB RF-02CA
580	6871VSMD08A	PCB KBD RF-02CA 50IN
581	5020V00647A	BUTTON CONTROL INNER
590	6871VSMD09A	PCB PSW RF-02CA 50IN
591	5020V00648A	POWER BUTTON INNER MN-50PZ4
600	6871VSMN17A	PCB EXTRA RF02CA
610	3501V00085A	BOARD ASSY P-BOARD

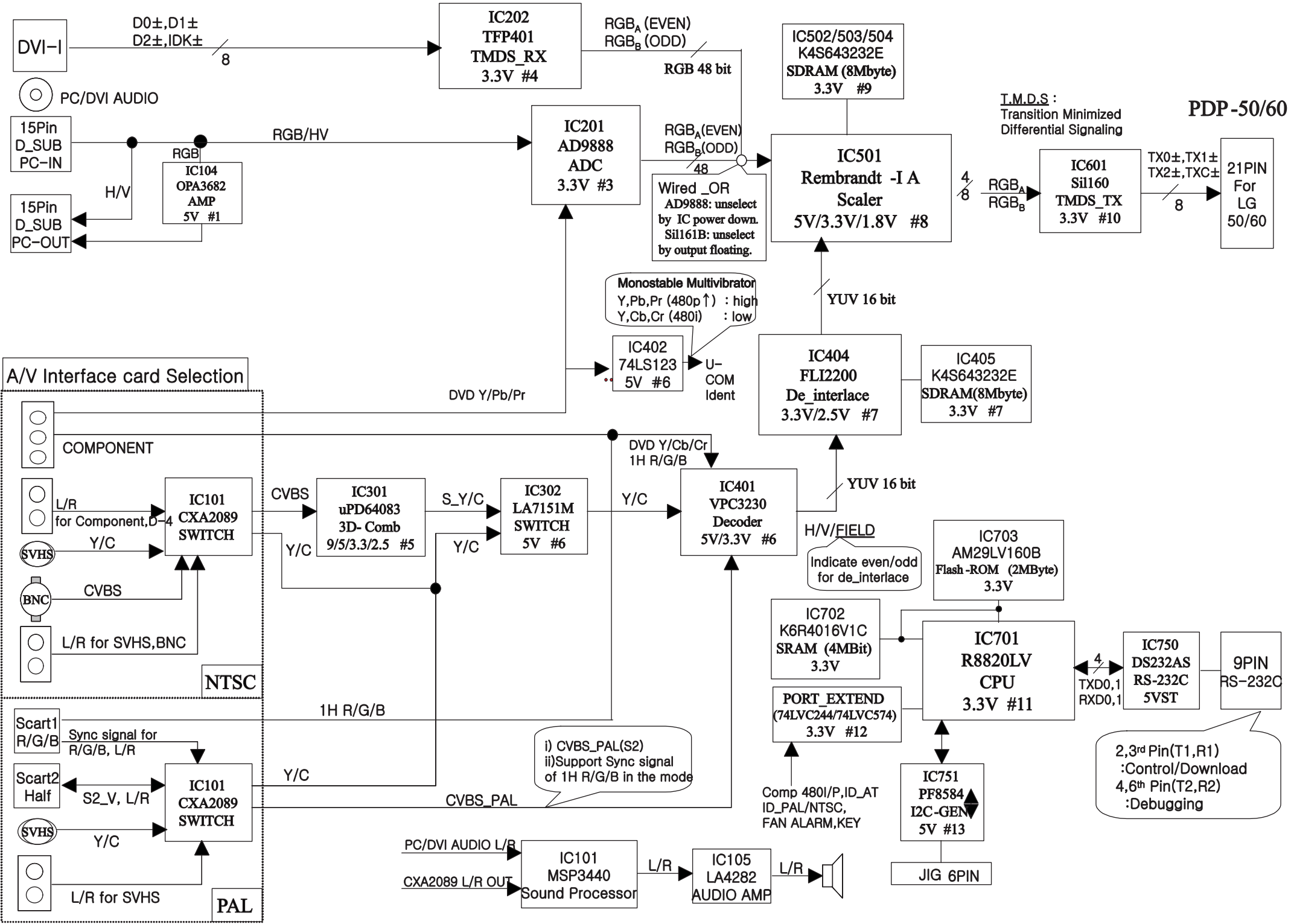
P50W26 Interconnect Diagram

NOTE: Some plug locations on the PWB vary depending on model.



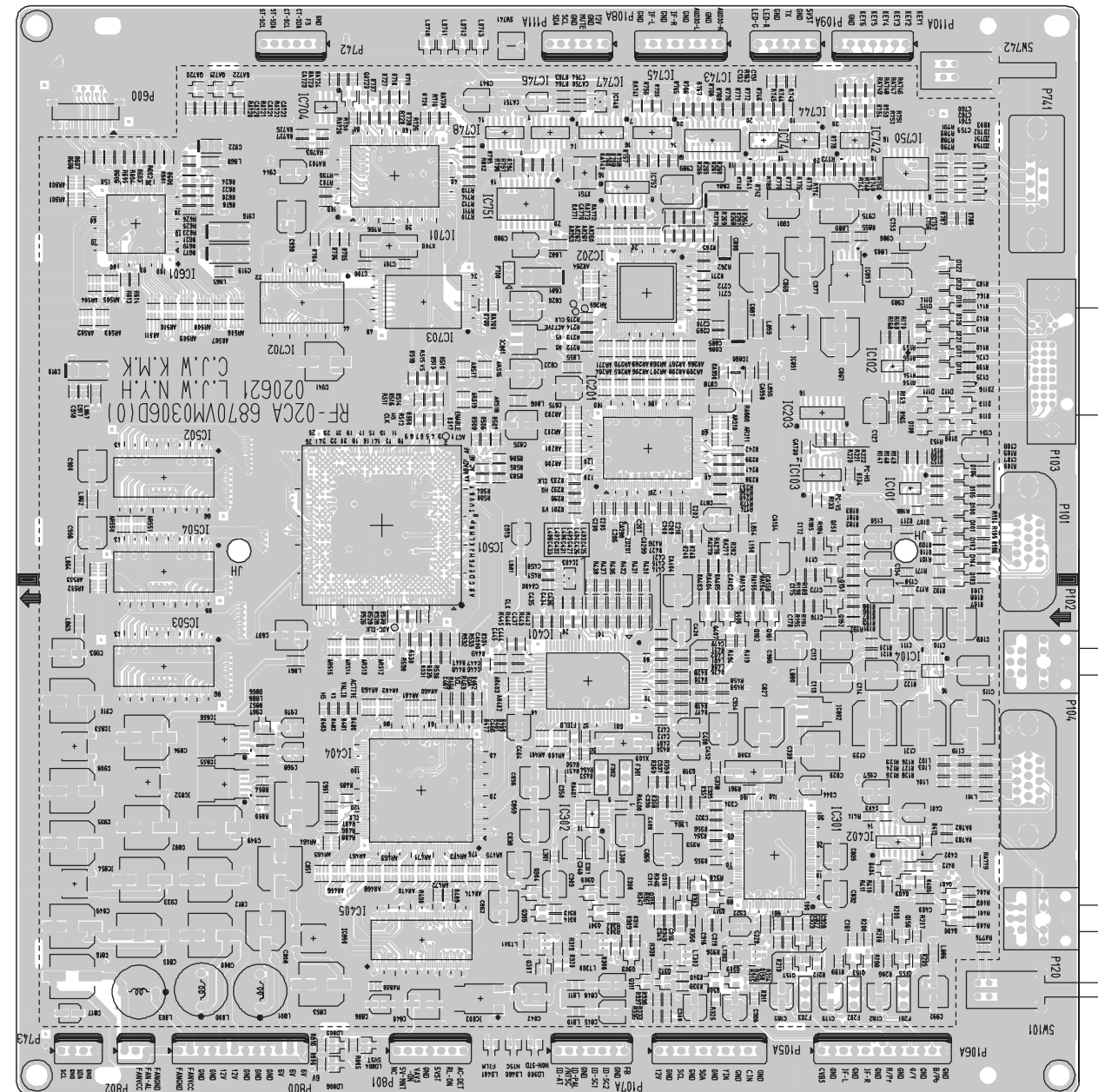
P50W26 Block Diagram

50 PDP VSC Board Block Diagram

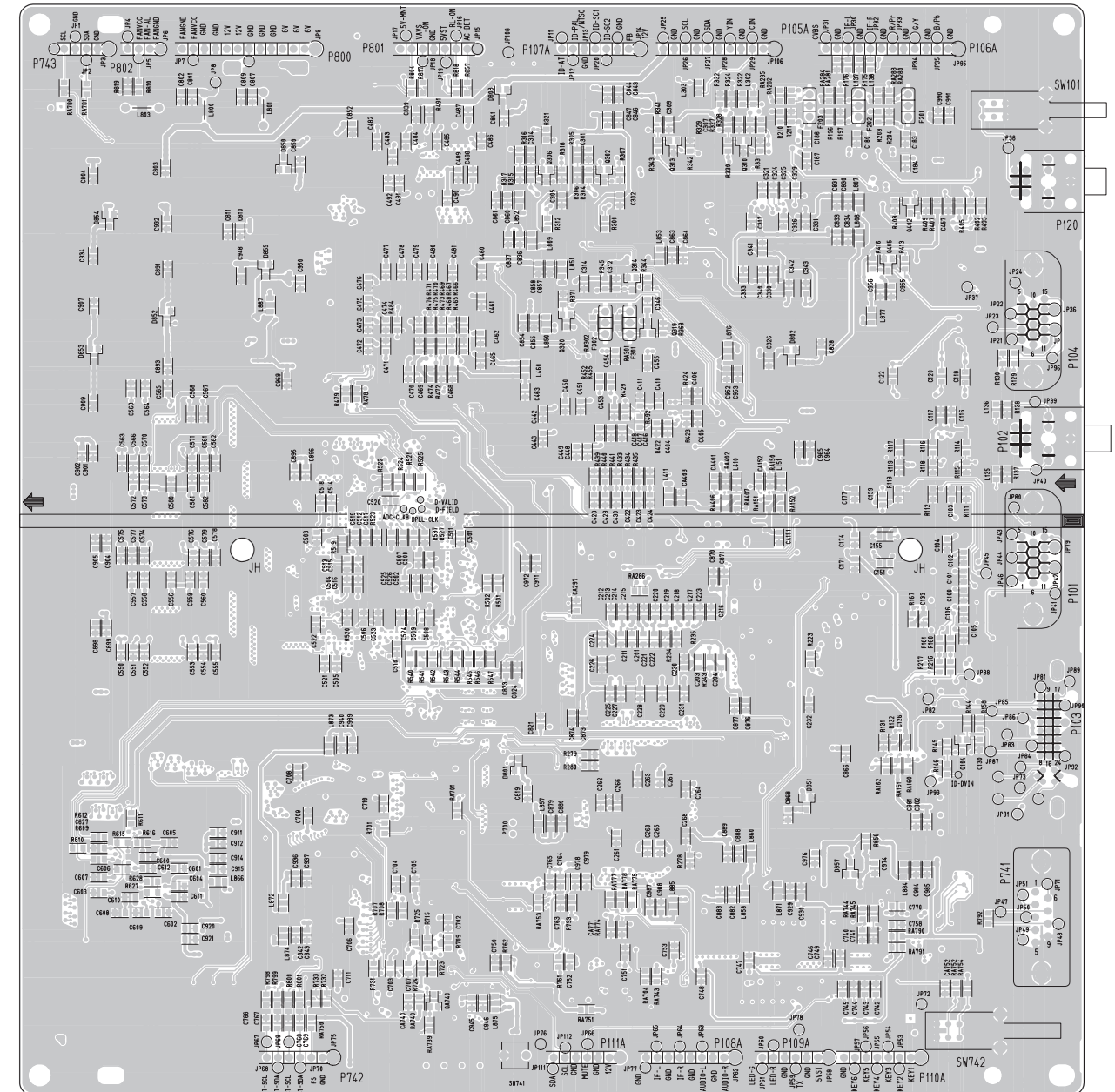


P50W26 Main PCB

MA I N(TOP)

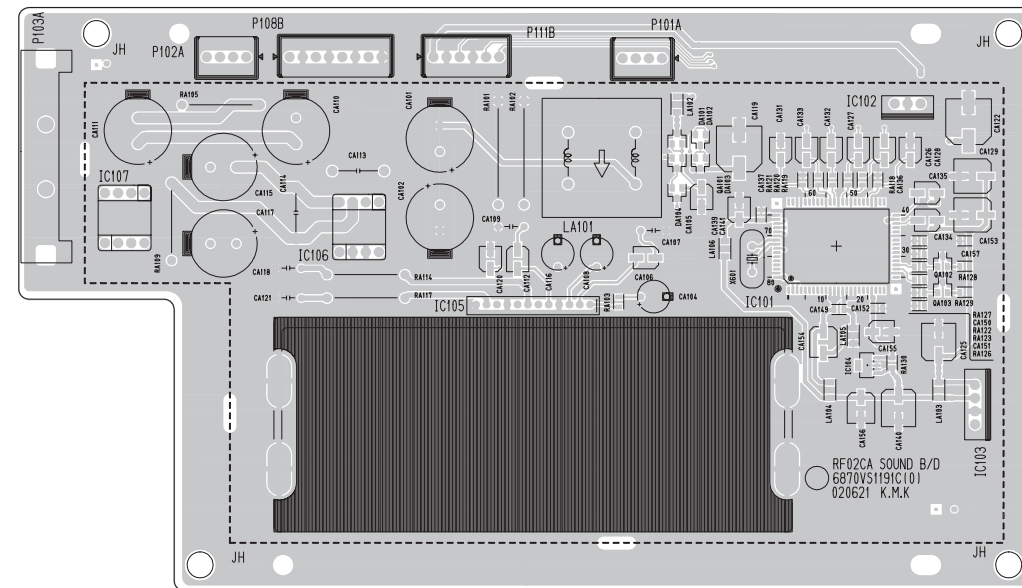


MAIN(BOTTOM)

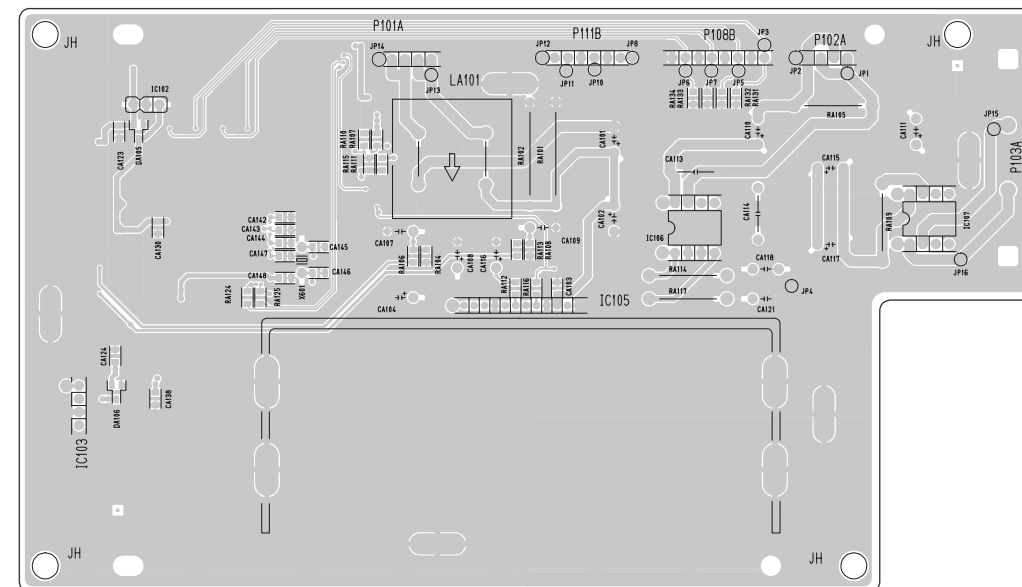


P50W26 Other PCBs

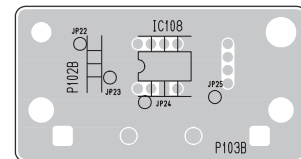
AUDIO(TOP)



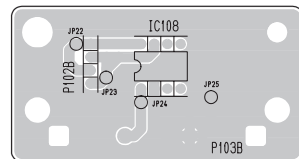
AUDIO(BOTTOM)



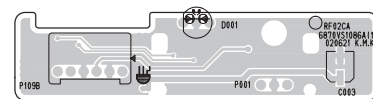
RIGHT SPK(TOP)



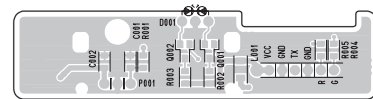
RIGHT SPK(BOTTOM)



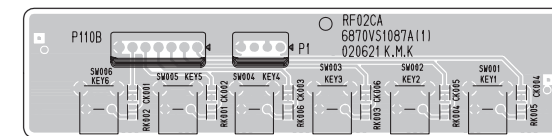
PRE-AMP(TOP)



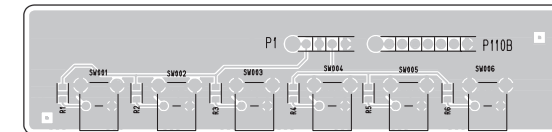
PRE-AMP(BOTTOM)



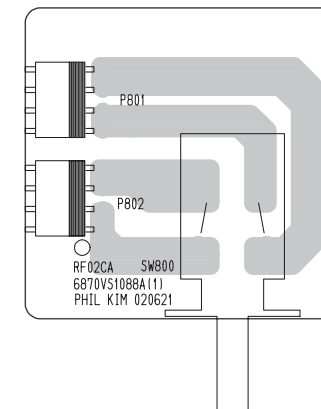
LOCAL KEY(TOP)



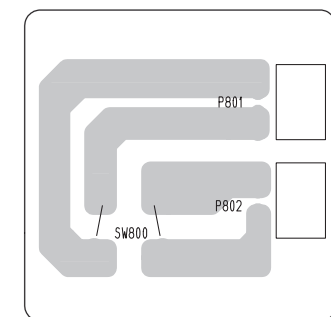
LOCAL KEY(BOTTOM)



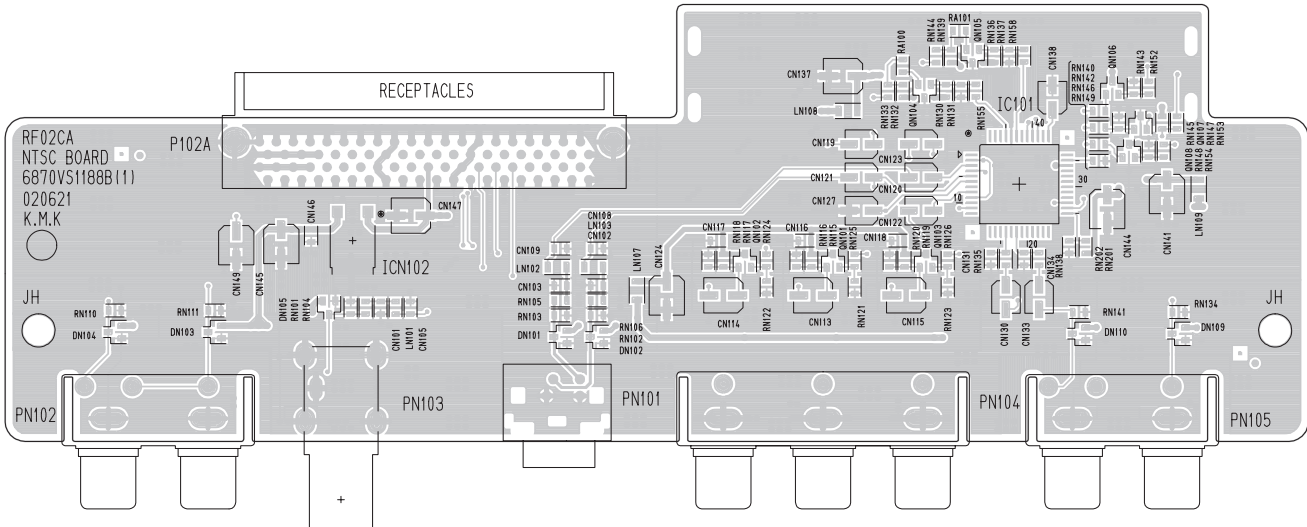
POWER S/W(TOP)



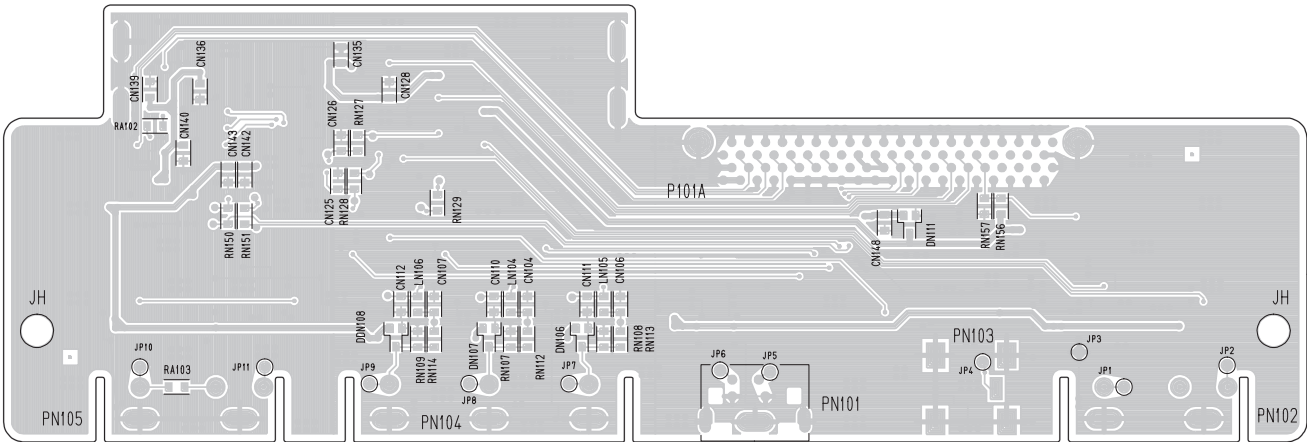
POWER S/W(BOTTOM)



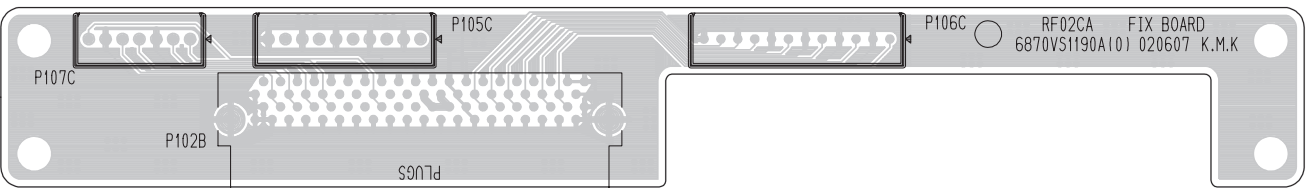
A/V NT SC(TOP)



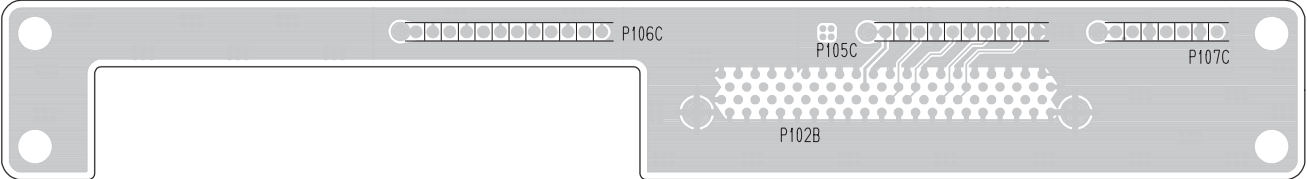
A/V NT SC(BOTTOM)



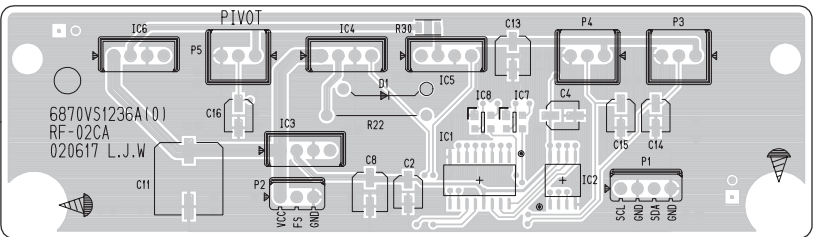
INTERFACE FIX(TOP)



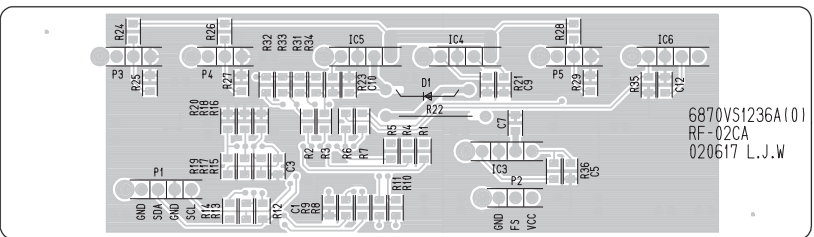
INTERFACE FIX(BOTTOM)



FAN CONTROL(TOP)



FAN CONTROL(BOTTOM)



Circuit

1

2

3

4

5

6

7

8

9

10

G

F

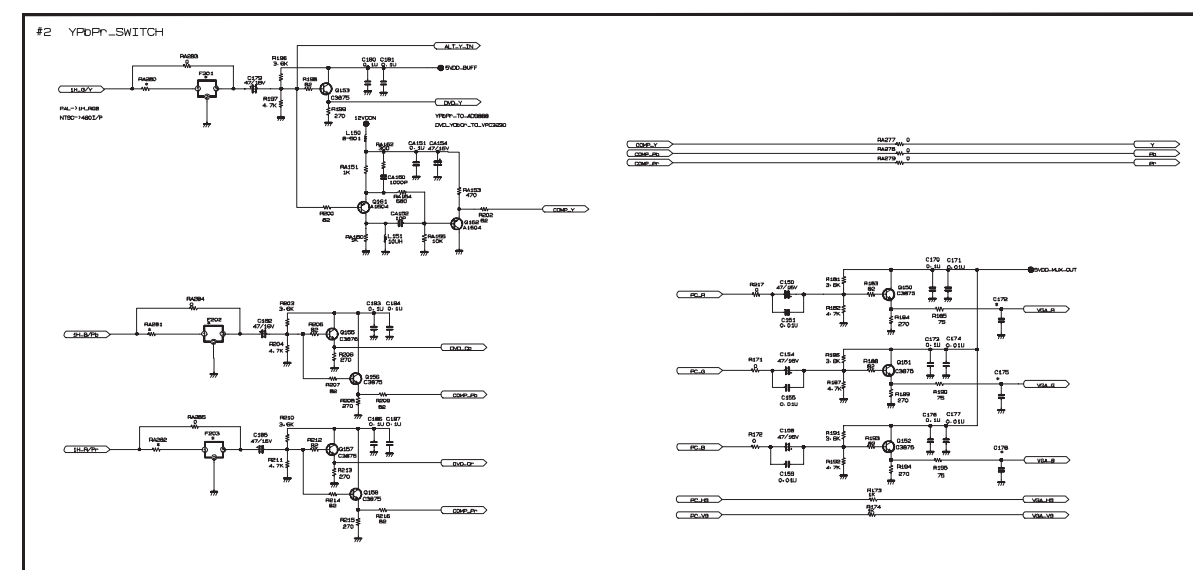
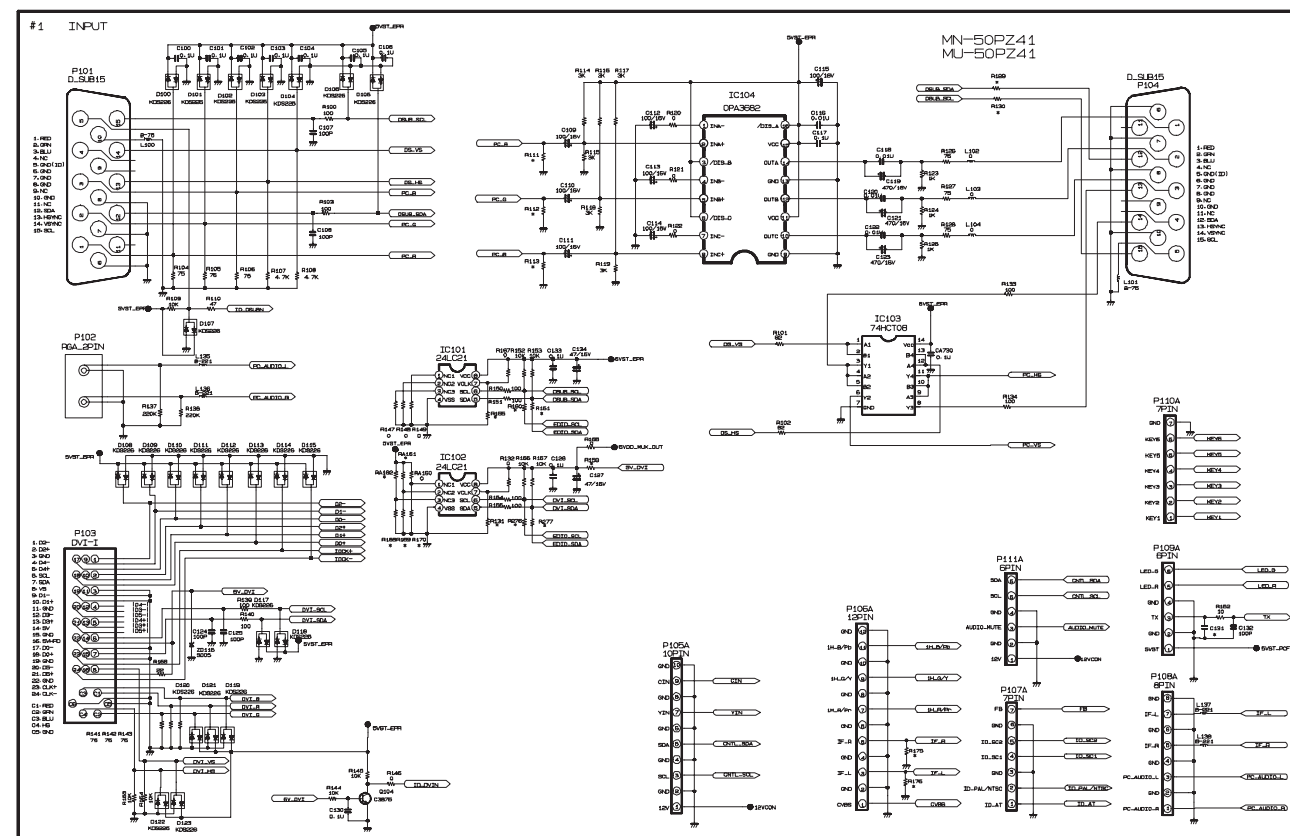
E

D

C

B

A



Circuit

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

G

F

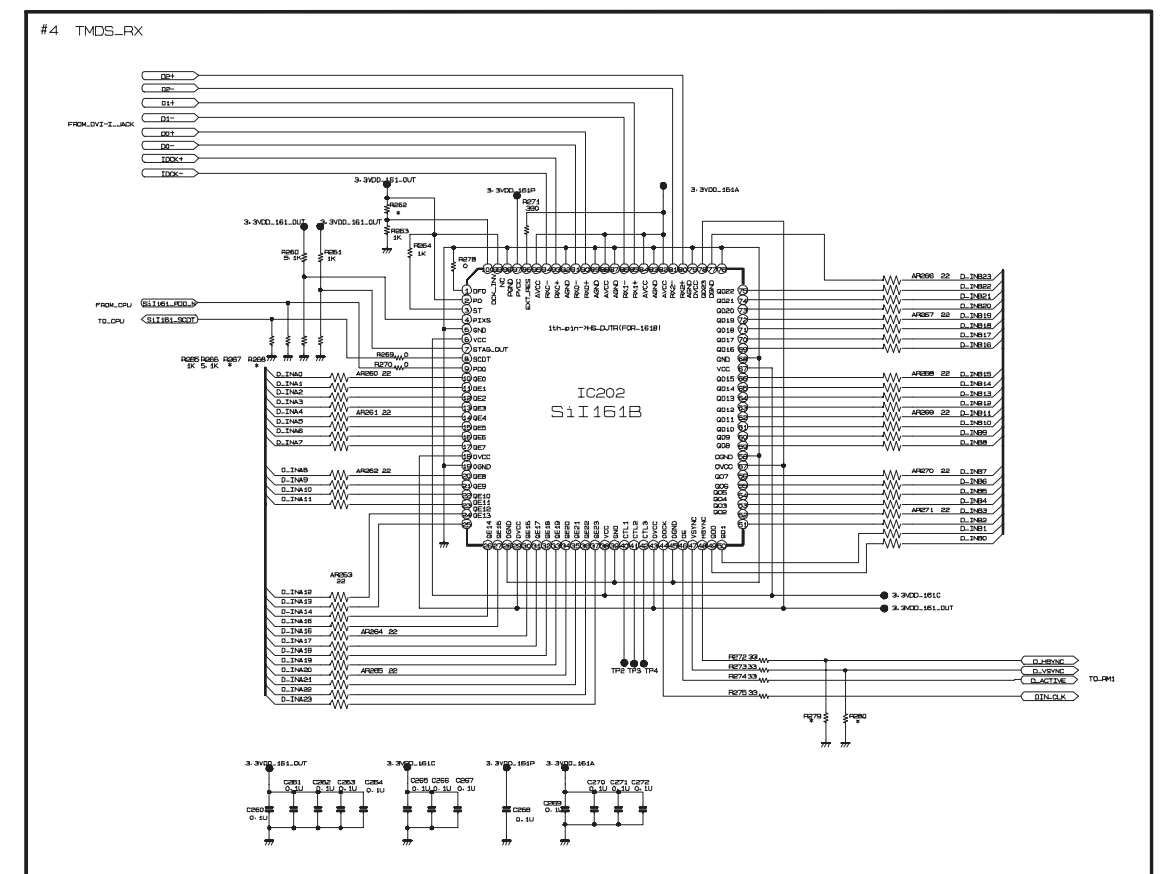
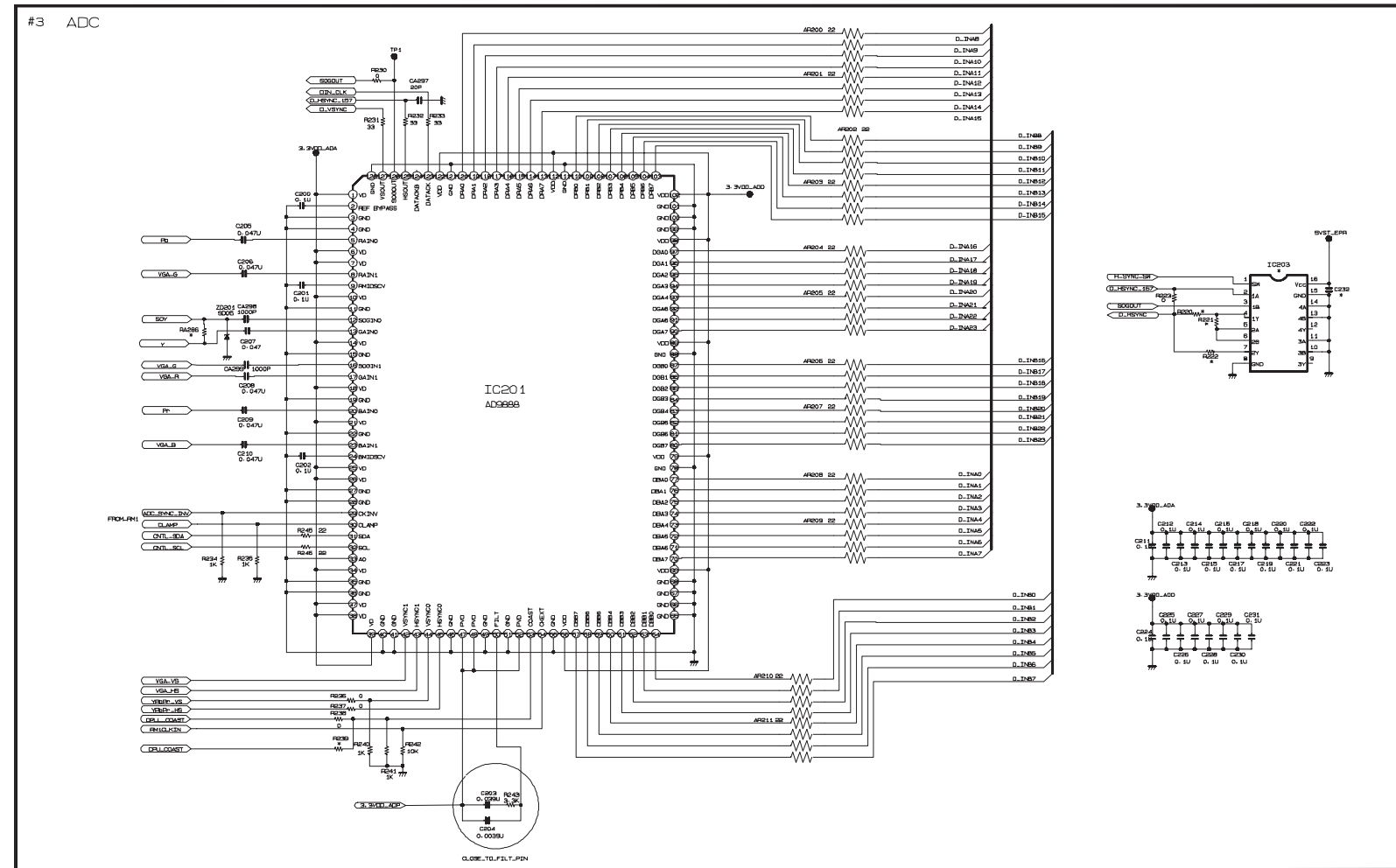
E

D

C

B

A



G

F

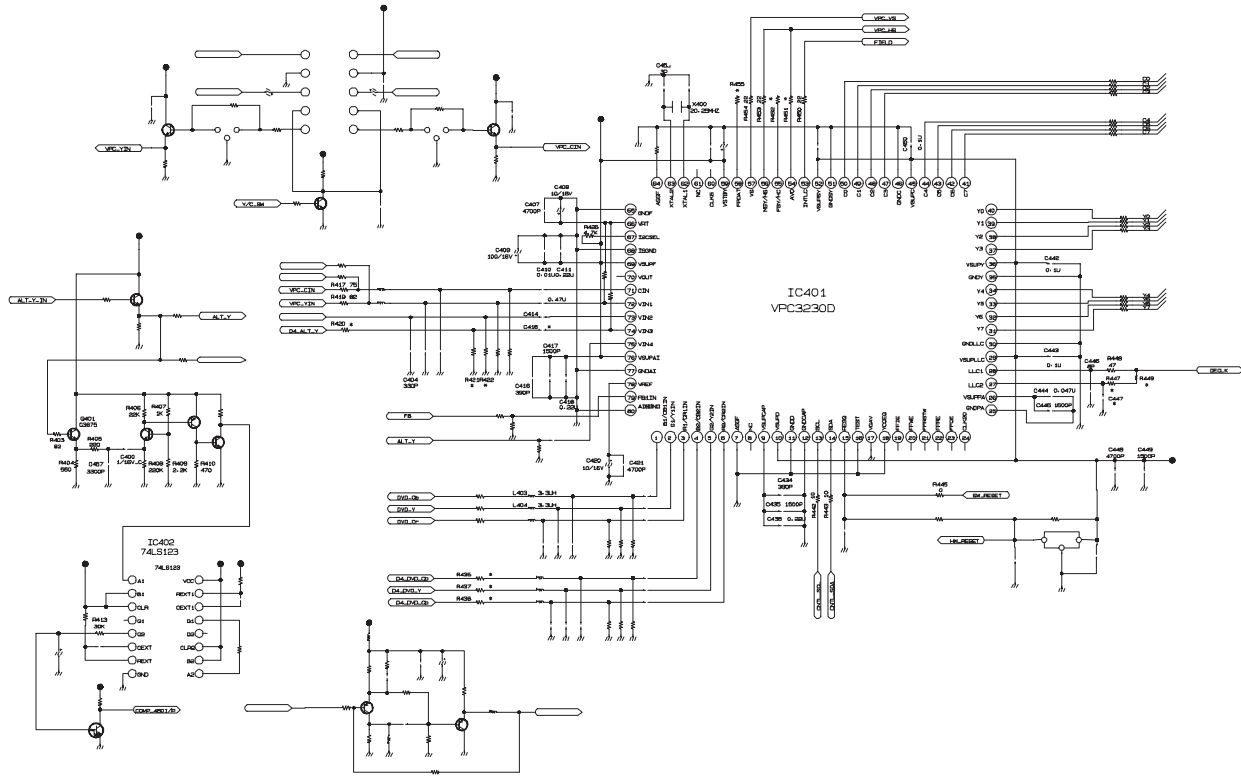
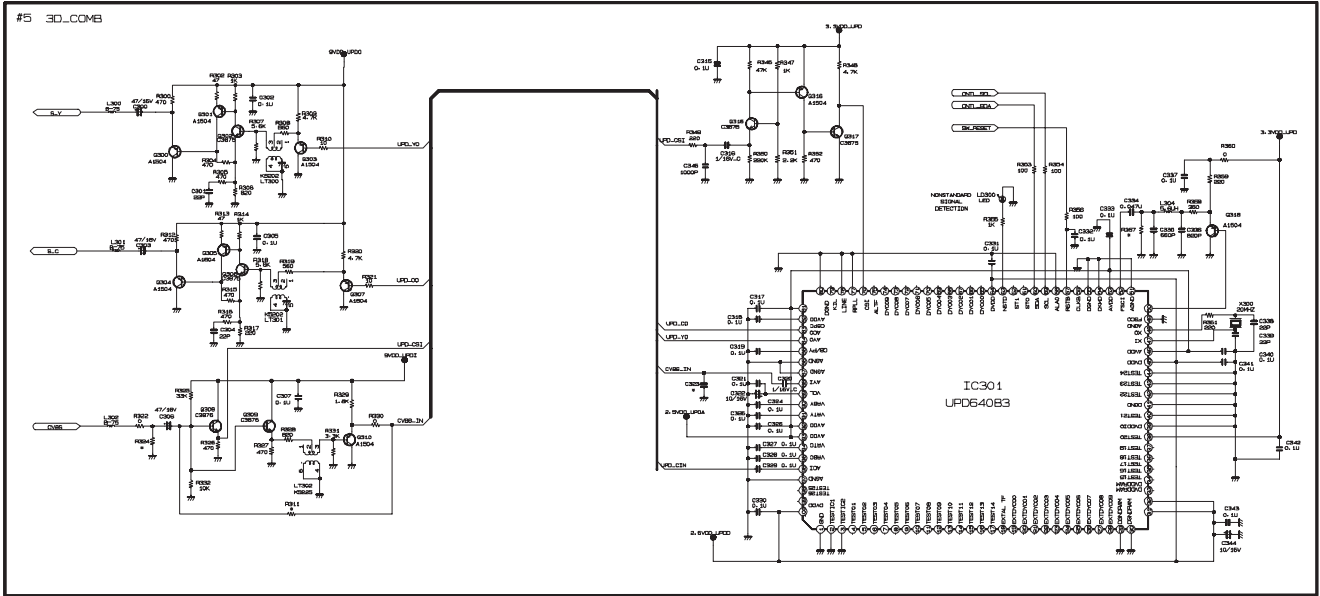
E

D

C

B

A



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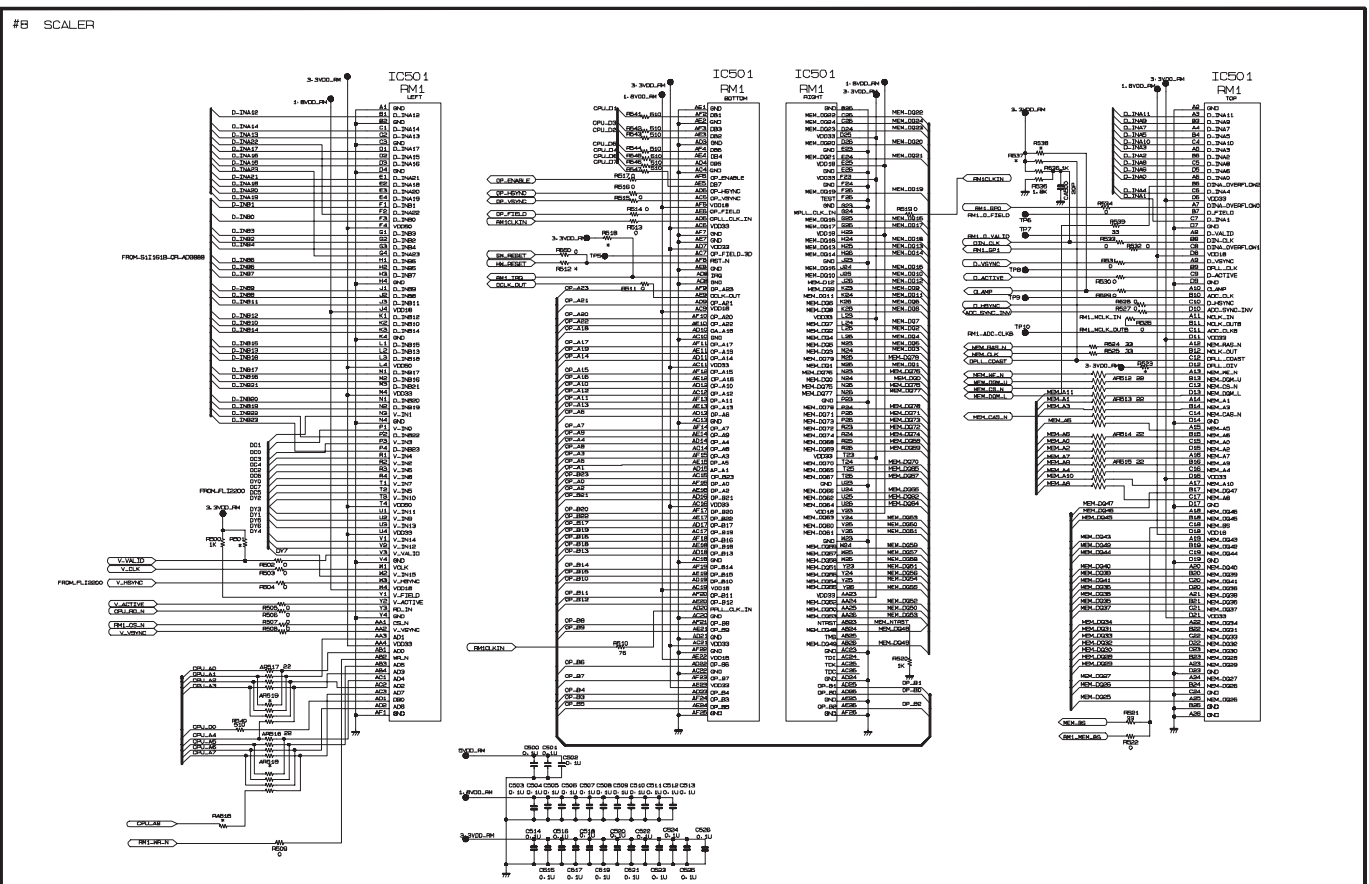
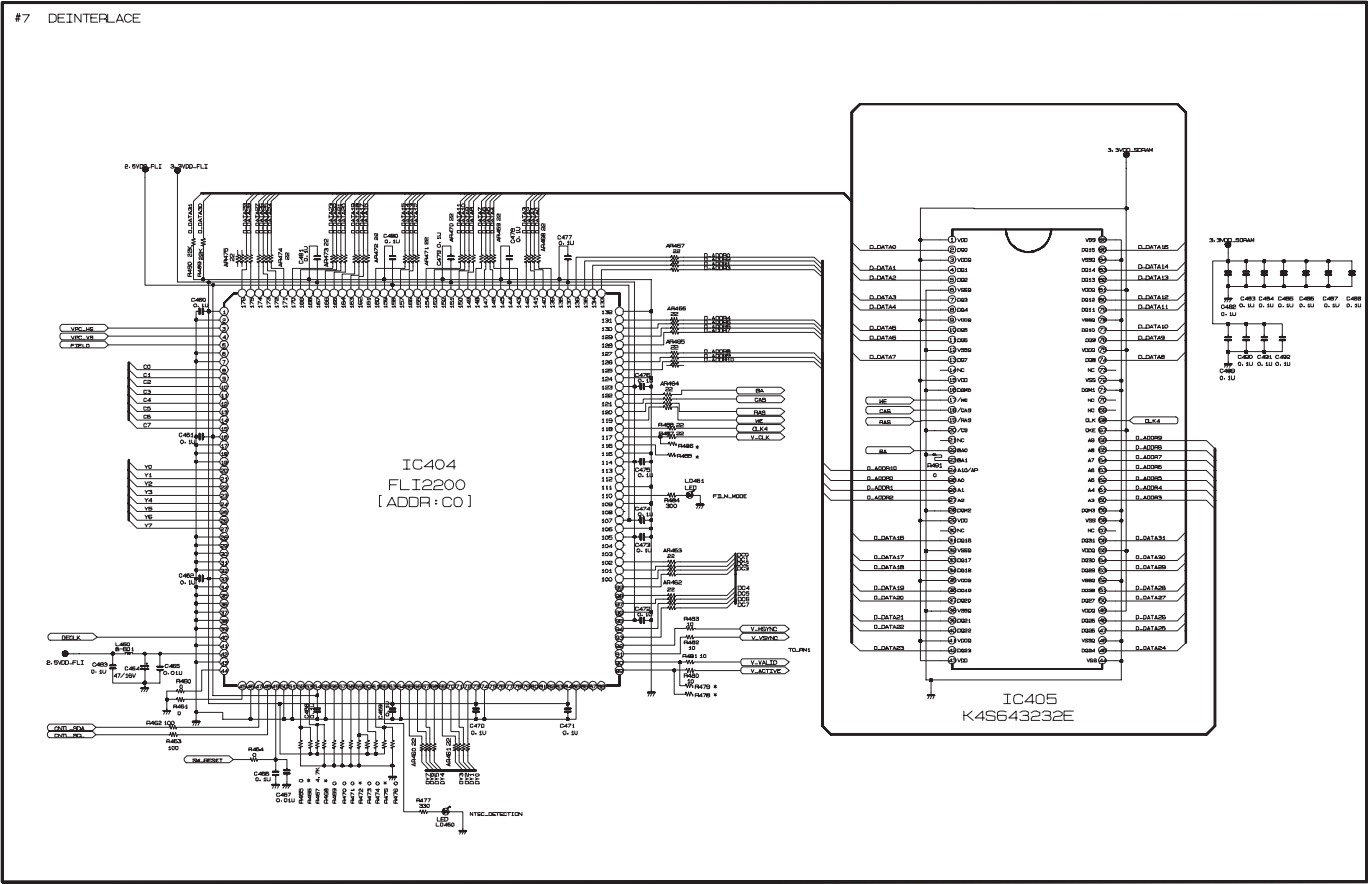
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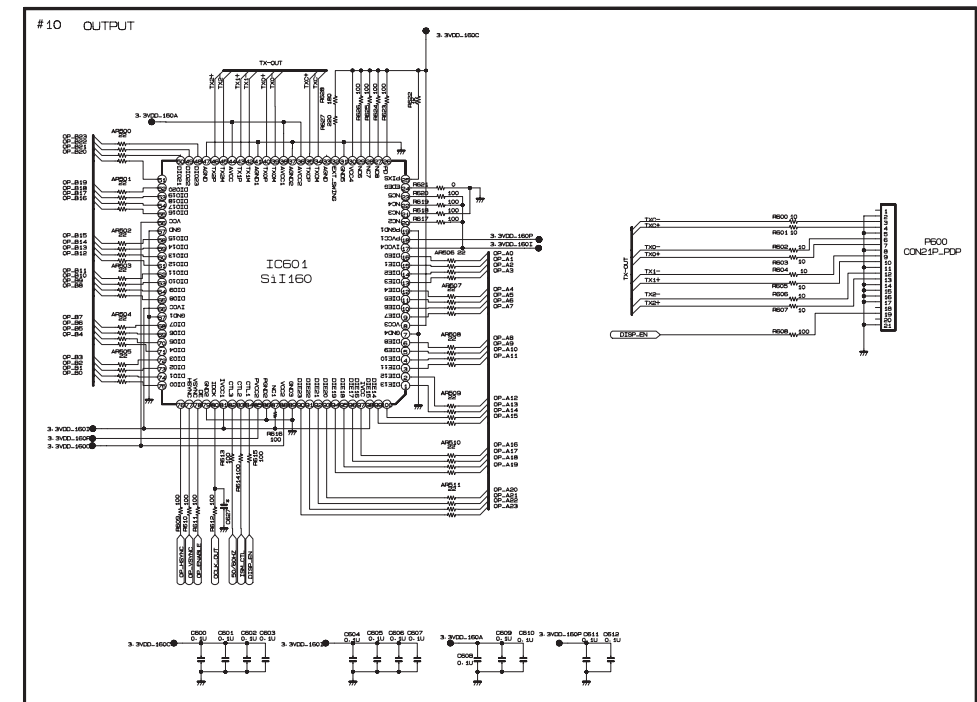
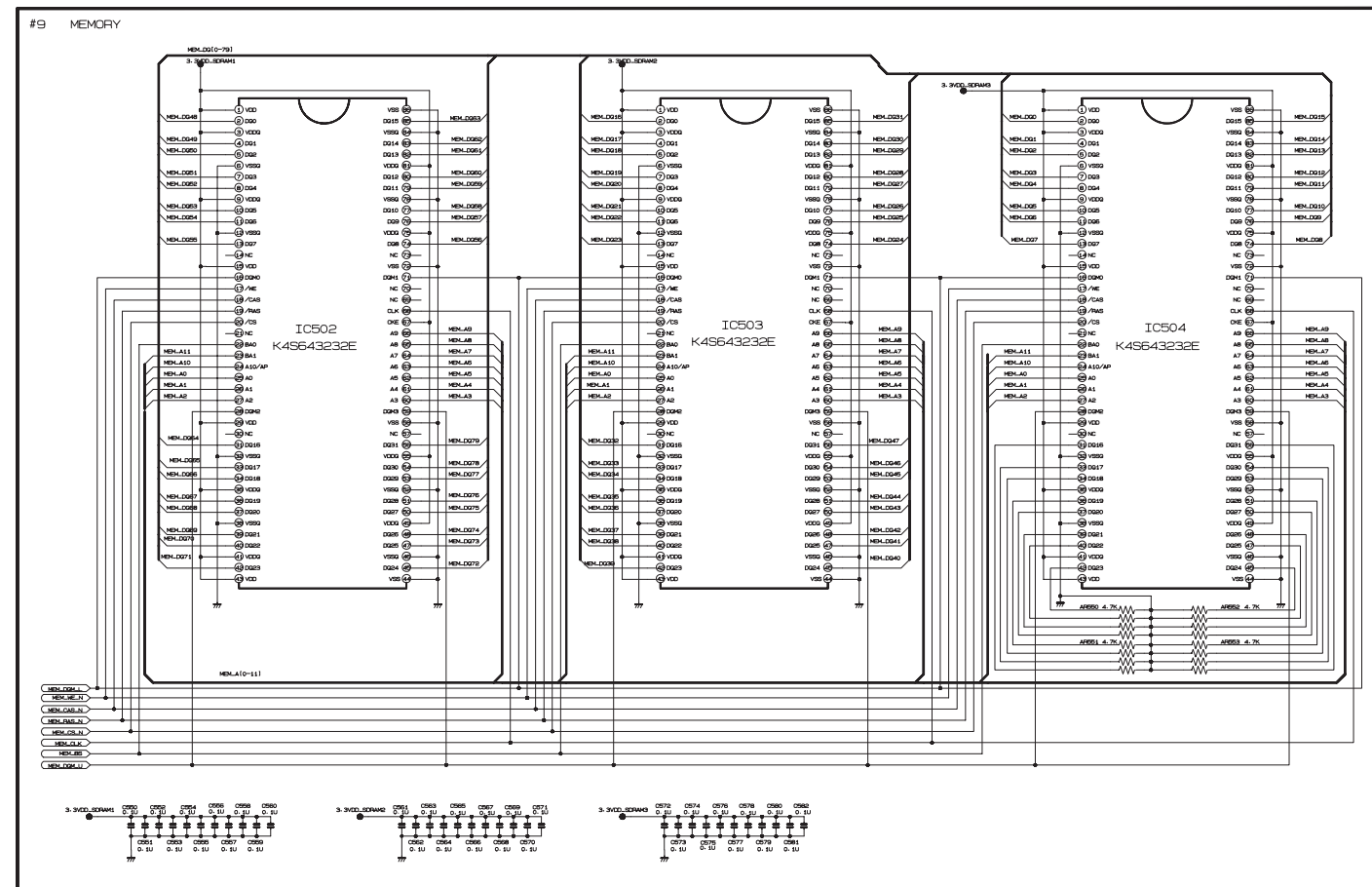
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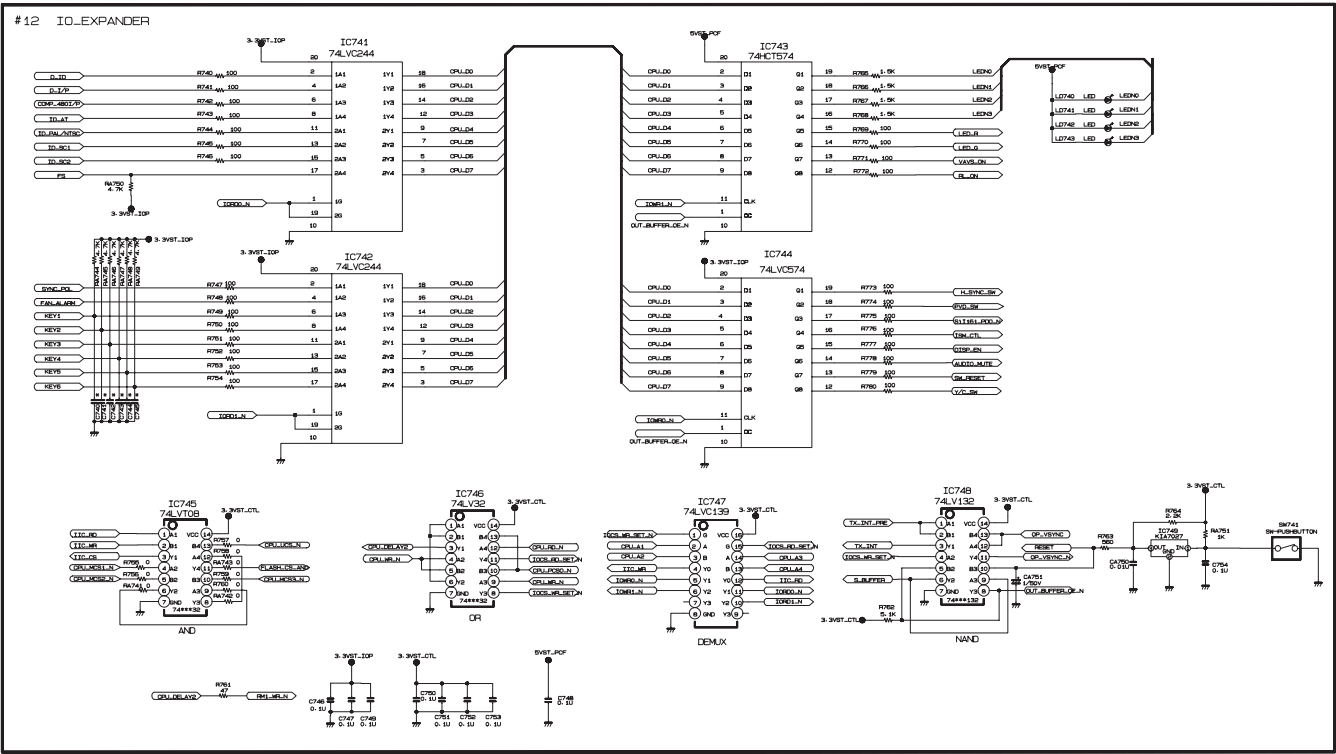
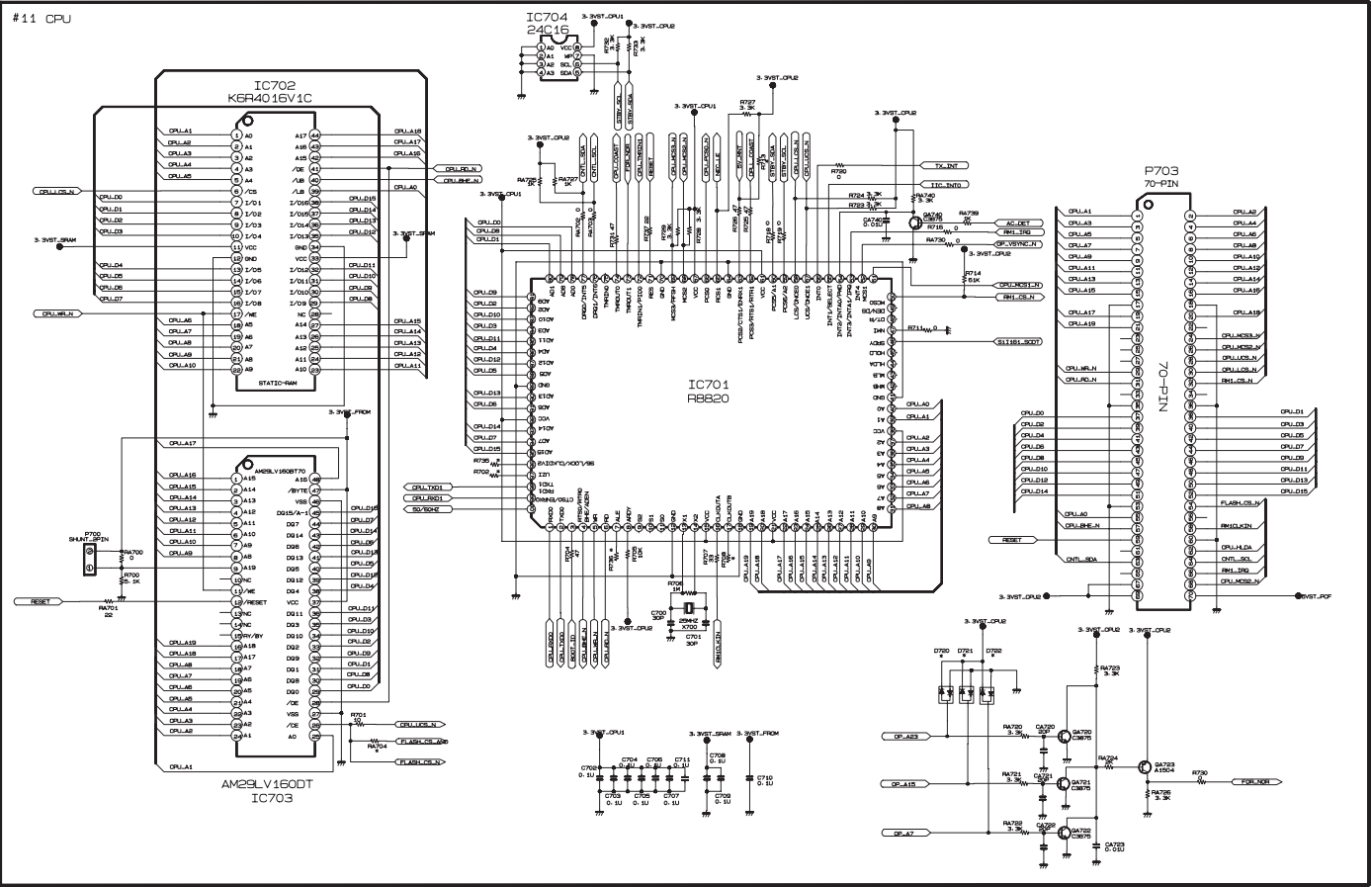
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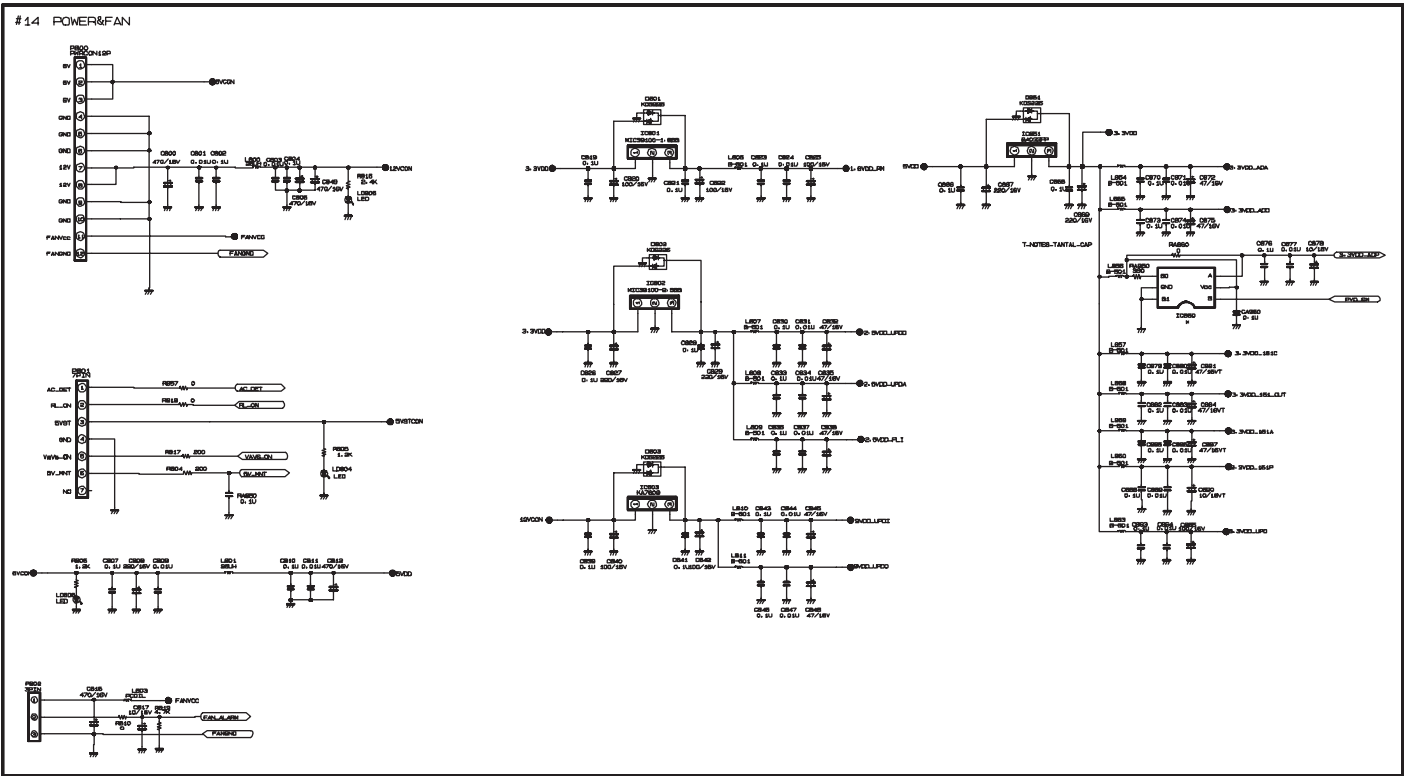
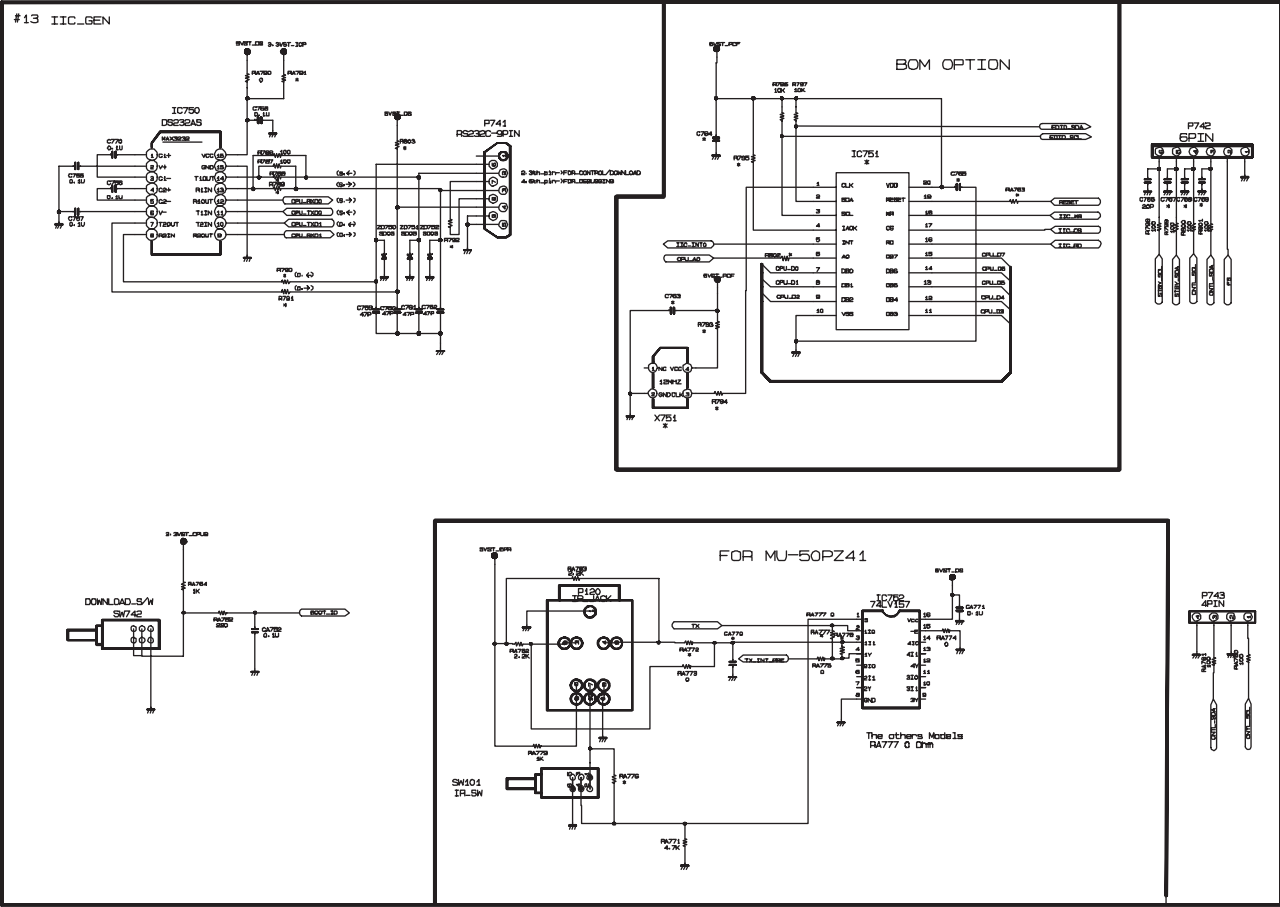
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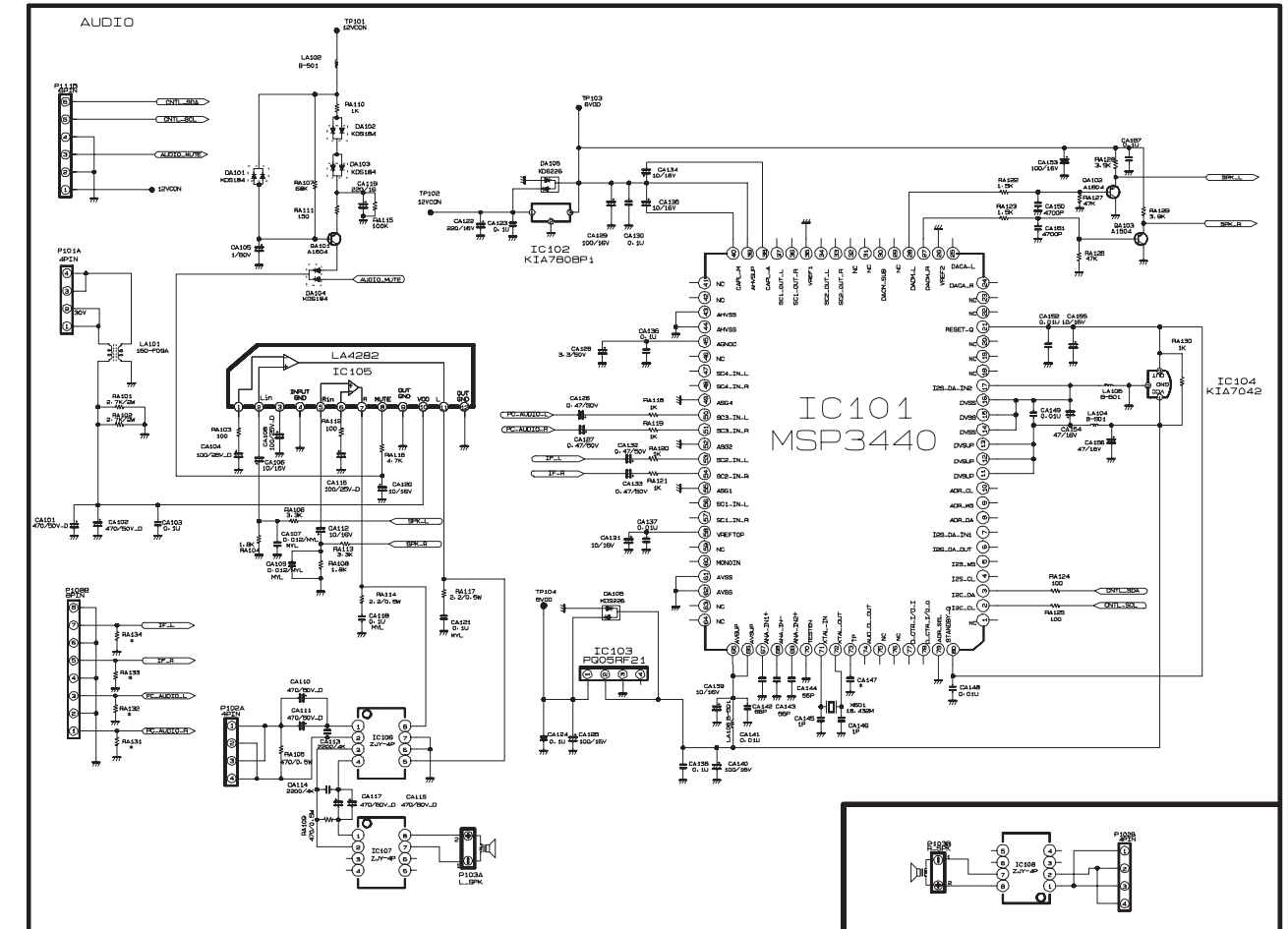
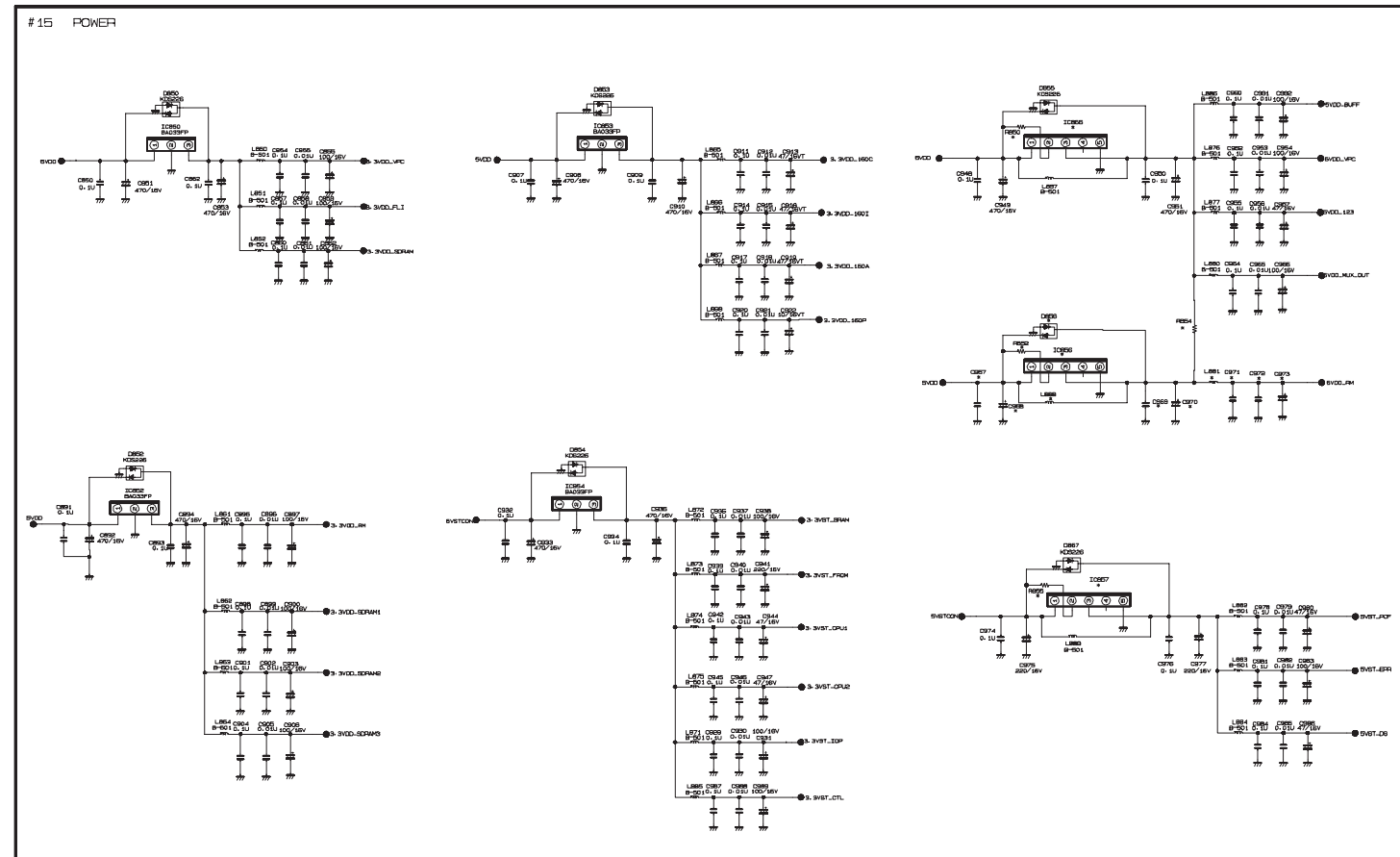
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CRITICAL SAFETY COMPONENTS ARE IDENTIFIED BY THE LETTER "X" IN THEIR COMPONENT DESIGNATORS. REPLACE ONLY WITH PART NUMBERS SPECIFIED.

Circuit

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